

AMERICAN VETERINARY REVIEW.

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EDITORIAL.

EUROPEAN CHRONICLES.

"HORSE DISEASE" IN MANILA.—If I am to adhere strictly to the title of "European Chronicles," in which I have the pleasure of sending Continental news to our readers, it will be considered strange that I should take for material subjects of American source; but would I be an up-to-date reporter should I ignore them, especially when it relates to something which, by the authority of my informant, is "entirely new to American vets. "?

A few days ago, while looking over the mail of all countries, which our friends send us to 14 Avenue de l'Opera, I found a letter from Manila, P. I., written by an old student and friend, reading as follows:

"*Dear Doctor* :—We have a disease in horses in Manila that is something entirely new to the American vets. The symptoms are very well marked; at first a high fever, 103° to 105°, followed by swelling of the sheath and legs, and, more markedly in the native horse, of a pad under the belly; membranes yellowish-white, with hæmorrhagic spots. The foreign horse will stand the disease better than the native. Appetite remains good up to near the end or death of the animal. The heart is early affected; pulse rapid, and at the end feeble and venous. As the pulse fades away the swellings disappear and the animal soon dies. This much for a few of the prominent symptoms. Post-mortem does not tell very much, as there are

no marked changes in the organs. The pericardial sac and pleural cavity are full of serosity; ante-mortem clots in heart; have noticed abscess in stomach in a few cases. Examination of the blood shows in all cases the presence of a spirillum or filaria, which is not known to any of us here. It is a small body, larger at one end than at the other, which has a long moving tail * * * it is exceeding active and motile. Can it be the horse sickness of Africa? The disease has been noticed in the Islands in former years, but never to the extent of the present rainy season. In some places all the native ponies have succumbed to the disease, and here in Manila the U. S. Government has lost many animals."

The question put by our correspondent—"Can it be the horse sickness of Africa?"—was, to my mind, likely to be answered in the affirmative. But it was merely a suggestion, and the question was too serious, and the subject too important for us to be the decisive arbiter. So, we called on Prof. Nocard, who gave us a confirmation of our correspondent's and our suppositions. Nocard wrote in a note: "The disease in question seems to me identical with 'Surra' of India or the 'Nagana' of South Africa. There is no doubt but that the parasite is a trypanosome. I would like to have glass slides of blood taken from the animals. Do sucking insects analagous to the *tsé-tsé* exist in the district? These insects would inoculate the disease with their stings."

Thus we are probably in the presence of a sickness which is parasitic, which, as in other diseases, is due to the same organism, the trypanosome, an organism which seems to give rise to three different manifestations—"Nagana," "surra," and "daurine."

We have sent to our *confrère* in Manila the answers he asked of us; we have told him of the request of Prof. Nocard, and by his further communications we hope to keep the readers of the *REVIEW au courant*.

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COCAINE AND MORPHINE.—A few months ago, in one of my "chronicles," I called the attention of our readers to the

use of cocaine in the diagnosis of lameness, which had recently been brought before the veterinarians of France, a process which has been resorted to for many years by American practitioners. The question of priority has no importance, yet I thought it might be well to establish the facts as they were, without any attempt or thought to take away any of the credit which belonged to veterinarians on this side of the pond. Anyhow, the benefits that can be derived from the use of cocaine were not to be ignored, and, of course, trials were made in various directions. Among the inquirers Mr. Pécus, veterinarian to one of the military schools of France (St. Cyr), was one of the most sanguine. With a certain object in view—viz., to find a practical process to substitute for neurotomy, in obtaining an alteration of the nerve substance—he made numerous researches; but, failing to find what he sought, he became satisfied to use cocaine alone, as a means of diagnosis. On account of the high price of the alkaloid he decided to combine it with morphine, and after a few trials adopted a solution of muriate of cocaine 0 gr. 15, muriate of morphine 0 gr. 10, distilled water 5 grams, and with this quantity, which he uses for one plantar nerve, he obtained results which throw a new light on the use of this compound. Indeed, while this anæsthetical association is not dangerous, it allows the practitioner to make a diagnosis in five or ten minutes, and, besides, its use is generally followed, between one and twelve days after the injection, by a disappearance of the lameness for a period of time varying from zero to forever. A curative action, then, which allows the veterinarian to resort to neurotomy in entirely rebellious cases.

In recording his observations Mr. Pécus divides the injections into two groups. Those that are diagnostic and curative and those that are diagnostic only. In the first class the injections have been diagnostic and certainly curative, because lamenesses of several months' standing have disappeared progressively in a few days and have allowed of the use of the animal for several years (two and three). In some cases, however, the injection had to be renewed, but the final result was

the same. In the second class, the positive result of diagnosis is all that has been obtained, but no diminution or disappearance of the lameness, which always returns to stay after the effects of the injection have subsided. Neurotomy in those cases brought about a satisfactory result.

This point established, Mr. Pécus continued his observations with the two alkaloids, and his general conclusions are:

Cocaine or morphine, separated or associated, in solution, injected on the tract of sensitive nerves, removes for the time being the pain in the peripheric end of that nerve. Those injections can be used to establish a positive diagnosis of the location of painful parts in affections situated between the point of injection and the periphery. They are sometimes followed by an analgesy sufficiently long and complete to be considered as having a true therapeutic action. This curative effect, rare with cocaine alone, more frequent with morphine, is more readily obtained and for a longer duration with the cocaine and morphine mixture. Injections of morphine are as diagnostic as those of cocaine, but possess curative properties more certain.

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TELEGONY—that is, impregnation or infection of the mother—is an expression recently adopted in zoötechny. It relates to an important point already treated by Dr. Debierre in his work on "*Heredite Normale et Pathologique*," where he puts the question: "Is it true that a first child impregnates its mother to such an extent that the child of a second marriage will resemble the first husband, dead a long time before?" Or, to widen the application, is it true that a thorough-bred female animal, covered by one of equal standing, would continue to give products resembling the first male when served by others of lower classes?

Much has been written upon this important question, and the controversy has been very active, advocates and non-partisans being unable to agree. And how could it be otherwise when the former were satisfied to take the exception for the rule and accept as undoubted evidence cases where ignored sexual con-

nections may have taken place, and cases where impurity of the breed, atavism, and surrounding causes only may have intervened. The question has already received ample attention at the hands of many scientists—Chauveau, Sanson, St. Yres, Menard, and others—and, yet, notwithstanding the negative results which were brought out from their experiments and observations, the idea still remains among some breeders, but probably more among those of dogs, that a pure-blooded animal, impregnated once by a male of lower standing—a pure hound with a mongrel, for instance,—after generations with a thoroughbred male, will give products with some of the characters of the mongrel. For many dog-breeders this doctrine of impregnation has many advocates, and many among them are much disappointed when the first pregnancy of a well-bred bitch is the result of a connection with a common dog; they fear that ulterior products, although the result of a perfectly selected accomplishment, may bring forth young ones resembling the first male.

To add to the list, already long, of evidences of the fallacy of this opinion, the eminent professor of zoötechny at the Veterinary School of Bruxelles related, in the *Annales de Médecine Vétérinaire*, published by that school, Mr. Ad. Reul, relates an experiment which he has made. A red sow of Tamworth breed was covered by a boar of her race. She had a litter of young ones of her red color. Several months later, from want of a boar of her breed, she received the services of a white Yorkshire boar, also thoroughbred. This second litter consisted of a dozen pigs, very strong, and all as snow white as their father, a few of them only having a few spots, particularly on their ears, slightly tinted, but these passed away after awhile. Therefore, this sow, with her Irish-setter color, had given by this second union a litter of young ones as white as their father, with some of the characters belonging to his breed. She, therefore, had not been influenced in her second litter by her first connection, although the male then had been one of her breed. Furthermore, a third time the sow was covered,

this time by a Tamworth boar. With him she got a litter of ten little ones, all red and of the same type as father and mother. Notwithstanding the extreme hereditary power of the white boar of her second pregnancy, she had not received any telegonic effect from him.

This experiment has a very great value of demonstration, and comes to increase the long series of evidences already existing against telegony.

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PROFESSIONAL PHILANTHROPY.—At the risk of being taxed with stubbornness in my ideas for recalling suggestions which have not received attention, I once again feel justified in writing on this subject, placing it before our readers, as I have already done in my "chronicles" of February and June, 1899, viz., on the propriety of a society to be formed among the veterinarians of the United States, for pecuniary assistance among the members, similar to that which has existed for years among physicians, which not only assists members during their life, but provides at their death the remaining members of their families with a fund made by the members of the society specially assessed for the purpose. In the articles which I wrote on the subject I called the attention of our readers to the great amount of good which could be done, and it is not necessary to repeat it here. Should such a society be formed I have no doubt that plans of organization and suggestions could be obtained from the New York Physicians Mutual Aid Association, which, after several years of successful existence, is able to give the family of each member who dies *one thousand dollars*.

But why should I again speak of this subject, as long as no one in America seems to have considered it worth noticing, and as not the slightest move has been made in the direction of establishing such an association? Yet it would be so easy for our National Association to take the matter in hand and run the American Veterinary Mutual Aid Society.

The reason which has constrained me to again bring this subject before the profession of America is because that in

France, besides the Association Centrale des Vétérinaires, already in existence, I read of the creation of another in the western districts of France (L'Association Confraternelle de la Charente Inferneure) which is being formed, admitting members for a trifle (\$4), demanding from each annual dues of \$2 and an assessment of \$2 at the death of each member, to go to his heirs.

Those figures do not need to be so high if we compare them with those which are required from the New York Association, viz., \$10 on admission and \$1 assessment. At present the yearly payment of a member is about \$16 or \$18. Should a society of veterinarians be formed, there is no doubt that 500 and perhaps 1000 members could be enrolled, and the good that could be done is too evident to require more consideration.

Many similar organizations exist all over the world for professional and working bodies. Why veterinarians could not organize one seems to me paradoxical. A. L.

THE BANQUETS OF THE A. V. M. A.

Dr. Tait Butler, late President of the National Association, and a frequent participant in the delightful social occasions referred to by the caption of this article, contributes an interesting addition to the discussion of this subject in the present number of the REVIEW. While he in the main endorses all that our friend, Dr. Williams, had to say in the previous month's REVIEW, he incidentally finds fault with the sage of Ithaca for his frequent absence from the banquet-table, and, while he does not in so many words charge that this dereliction of his duty is owing to a fear of the pranks of the toastmaster, he intimates that so much is due to the veterinary hosts by virtue of his many desertions of the banquet function that he should be forced to stand up on the next stated occasion and talk for an hour. In defense of the late chairman of the Committee on Publication we have certain knowledge that his abstinence from the delights of the banquet were solely in response to duty, for on several occasions we have found him when the dinner was

breaking up sitting in his room delving deeply into the work of his committee, correcting poor English, expunging irrelevant twaddle, and arranging, inserting, and otherwise preparing the story of the closing convention in a manner that would make it a creditable interpretation of the scientific and practical work accomplished.

But we, for once, must disagree with the conclusions of both our esteemed correspondents, for we fail to appreciate the force of their contention that the speeches delivered on these occasions are unworthy of the most advanced representatives of the veterinary profession. At the Atlantic City meeting we were particularly impressed with their value, both as entertaining addresses and as patriotic and scientific contributions. To our point of view, it is not intended that these occasions should be the opportunity to communicate the results of scientific research, nor for the unloading of abstract medical theories. The convention hall furnished the opportunity for such deliberations, and the banquet has been, so far as we know, regarded as an occasion for pleasant social conviviality, the commingling of old friends and of new acquaintances, while the repast of all that is most delighting to the palate and nerves is intended to place the guest in the best spirit to enjoy the pleasantries of the occasion. When the plates are removed and the master of ceremonies begins his duty of introducing the speakers, every one is presumed to be in humor to listen to short after-dinner addresses upon subjects as various as the speakers are numerous, the topics assigned having some reference to the character or association of the gentlemen designated. Thus there is furnished a variety of subjects, and the serious or scholarly speaker will take occasion to indulge in a polished presentation of his theme, while he of the jocular mind will delight his hearers with a witty handling of his subject that both tickles the fancy and cheers the mind, burdened for the previous few days by the weightier problems of medical science.

The last occasion was rich in variety and lofty in sentiment, reaching out from national legislation down to the work of the

arrangements committee. We fear that our correspondents are not really good critics of the occasion to which we refer, for, while one was absent, the other was probably so engrossed with the very important part which he played in the proceedings that he was not in condition to be a calm and critical observer of the events as they transpired, and as a sufficient refutation of the charge that the addresses lacked anything in polished finish we point to the speech of our late President, which was a patriotic and learned discourse, delivered with the fire of an orator and received with enthusiastic applause.

It may be true that a toastmaster may indulge in a little pleasantry by taking a diner unawares, but the very *impromptu* character of the remarks which are thus called forth is the charm which commends it. It would be cruel, in our judgment, to make the annual banquet an occasion for set speeches, and it is doubtful if any improvement can be made upon our present system unless it be the inclusion of the ladies as guests, in which event the force of these remarks becomes more apparent.

MINNEAPOLIS IN 1902.

The Executive Committee of the American Veterinary Medical Association has decided that the thirty-ninth annual meeting is to be held in Minneapolis, Minn., Sept. 2, 3, and 4, 1902. This is but a just recognition of the claims of this beautiful city of the Northwest, for her loyal sons have year after year extended an earnest invitation to the Association to accept of their hospitality and lend its great influence to the profession of that vast section. But this year she took up the question with an enthusiasm and unanimity we have never seen equalled, and her overtures were simply irresistible—for we verily believe that every citizen at all interested in the subject importuned the committee in behalf of the Minnesota metropolis. While the REVIEW has uniformly opposed the holding of the national conventions in other than central localities, it is convinced that much can be accomplished in the way of strengthening the Association and disseminating its influence for the

good of the cause by a visit to this hitherto neglected section, for the territory to the north, east and west of Minneapolis has many sterling veterinarians who have found it impossible to attend its meetings, and by giving them this opportunity to participate in the programme and to associate themselves with the organization they are likely to feel more disposed to make an effort to be present at future meetings. The association already numbers many of Minnesota's leading veterinarians among her very best members, and we feel assured that much good is to flow from the committee's decision for 1902.

SURGICAL CLINICS.

The "revival meeting" of the Veterinary Medical Association of New York County, Jan. 3, was one of the most gratifying events that has occurred in a long time in the vicinity of Gotham. It shows that a real association is possible if something of practical interest is to be transacted. If one or two enthusiasts can present a programme sufficiently attractive to bring together half a hundred local veterinarians, what a grand association could be built up if each one would contribute his mite, whether it be a paper upon a practical subject or a demonstration of a surgical procedure? Evidence accumulates through such events as this that for busy practitioners the surgical clinic has the greatest charm and that they can least afford to absent themselves from meetings where this is a feature of the programme. We believe, however, that the literary section should not be ignored in local associations, but that the papers should have a bearing upon the demonstrations of the evening. We have frequently observed a little group standing to one side, criticising the methods employed in performing certain operations, and suggesting to each other better ways which they have adopted. Now, if these gentlemen were to discuss these points in open meeting it would be beneficial to all, and by an interchange of experiences, many important points might be brought out. We would suggest that the demonstrations of one meeting be discussed the following

month, the subject to be opened by a short description of the technique by the operator, and if others present employ a different and, as they believe, a better method, the opportunity would present itself for a statement of their objections, and the advantages of their means. This would start a discussion which would be of real service, and greatly enhance the value of the association.

DEPUTY HEALTH COMMISSIONER JOSEPH H. RAYMOND, of Brooklyn Borough, New York City, who has just been appointed to that important office, is not a novice in the conduct of municipal health matters, having filled the post of Health Commissioner of Brooklyn years ago. He has always appreciated the value of the educated veterinarian, having been the first health official in this country to appoint a veterinarian upon his staff. For this recognition he was in 1890 elected an honorary member of the United States Veterinary Medical Association. Since his recent appointment he has expressed a desire to have a conference with the leading veterinary practitioners of Brooklyn, in order to obtain their views with regard to the best methods of dealing with contagious diseases of animals, and for the purpose of securing a thorough understanding and unity of action in bettering the condition of both animal and man. Such men should receive the unstinted coöperation of every member of the profession.

THE Publishers beg to acknowledge the response on the part of the REVIEW readers, to the appeal which was made editorially in the last issue, calling attention to the advertisement which appeared at the foot of this page, in that number, for back numbers of the REVIEW, that were needed by certain of the subscribers, to complete their volumes. So general was the response from those that had duplicates of those numbers that we were able to fill all the vacancies, and have withdrawn the advertisement, except as applying to April, 1901, numbers, a few of which will still be welcomed.

ORIGINAL ARTICLES.

THE X-RAY AS AN AID IN THE DIAGNOSIS OF TUBERCULOSIS IN CATTLE.

BY J. V. LADDEY, D. V. S., ARLINGTON, N. J.

Paper read before the New Jersey Veterinary Medical Association, at Trenton,
January 9, 1902.

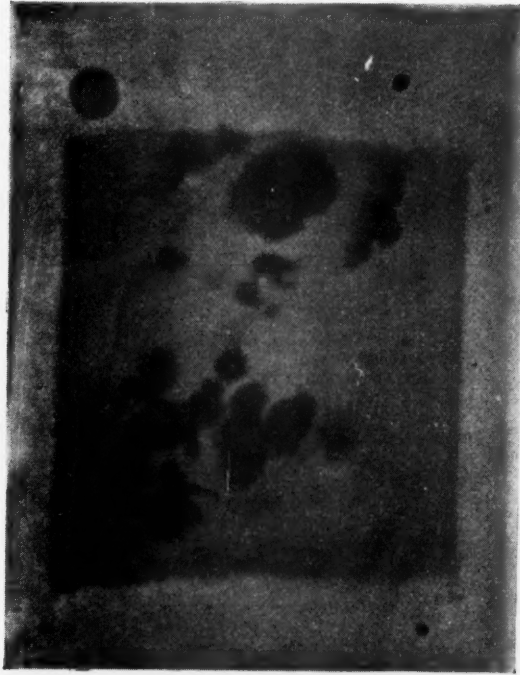
The very slow, and in some respects often impractical way of examining cattle for tuberculosis by means of the tuberculin test, has led me to experiment with the X-ray as to the feasibility of detecting the disease in the living animal. I arrived at satisfactory results. The infiltrated calcareous matter, which it seems exists already in the early stages of tubercular lesions, prevents the X-ray from passing through the lesions, thus causing a shadow or opacity. After the successful fluoroscopic test, I decided first to have radiographs made, to ascertain whether it would be practical to go to the trouble of experimenting on the living animal. Being compelled to take expense into consideration, I chose specimens, not with a view to obtain



PHOTOGRAPH NO. 1.
Portion of Pleura with Tubercles, spread
on cardboard.

impressive pictures, but to put the idea to a severe test. Accordingly I selected lesions with small tubercles in the early stages, as in Plates No. 3 and 4, arguing that if disadvantageous specimens showed satisfactory results, the better developed cases would be less penetrable to the rays, and therefore more evident. It is obvious from the photographs that if an enlarged tubercular mediastinal gland were to be radiographed, its shadow would be as dense as that thrown by compact bone tissue.

Photograph and Radiograph No. 1 present a portion of a pleura with tubercular tumors spread on cardboard. In the upper left-hand corner is the radiograph of a dime exposed



RADIOGRAPH NO. 1.

Portion of Pleura with Tubercles, spread on cardboard.

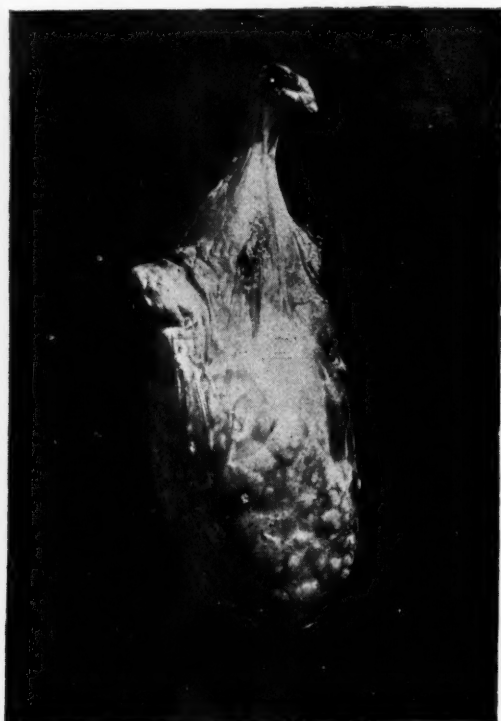
simultaneously with the specimen, to show the comparative opacity of coin and tumors.

Photograph and Radiograph No. 2 show a tubercular abscess of the lung, which is still in the semi-solid cheesy stage, but which, nevertheless, throws quite a dense shadow.

Photograph and Radiograph No. 3 represent a portion of the diaphragmatic peritoneum with tubercular lesions in the early stage, when they have a transparent greyish-pink rounded and granular appearance, but even here there is sufficient calcareous matter present to cast a shadow upon exposure to the rays.

Photograph and Radiograph No. 4 present a portion of the

thoracic wall with lesions also not far advanced. It also shows the relative density of the shadow cast by the portion of the rib and the tubercular deposits.



PHOTOGRAPH NO. 2.
Tubercular Abscess of Lung.

The radiographs showing such satisfactory results, I proceeded to make arrangements for a fluoroscopic examination on the living animal. The examination was made in a dark booth erected for the purpose, with a 12-plate static machine to generate the electrical current. The examination was made on both sides of the animal; an assistant manipulated the Crookes' tube on one side of the animal, so as to have it directly opposite the fluoroscope through which the cow was examined on the opposite side.

For the first examination the subjects were four thin cows, which were selected because they were thought to be of a tuber-

cular diathesis. The observations through the fluoroscope were as follows :

Cow No. 1.—The fluoroscopic view on both sides showed a



RADIOGRAPH NO. 2.
Tubercular Abscess of Lung (cheesy stage.)

few undefined opacities in the posterior portion of the thorax.

Cow No. 2.—Here the fluoroscopic view presented more and somewhat smaller, but less sharply defined shadows, distributed over the entire thorax.

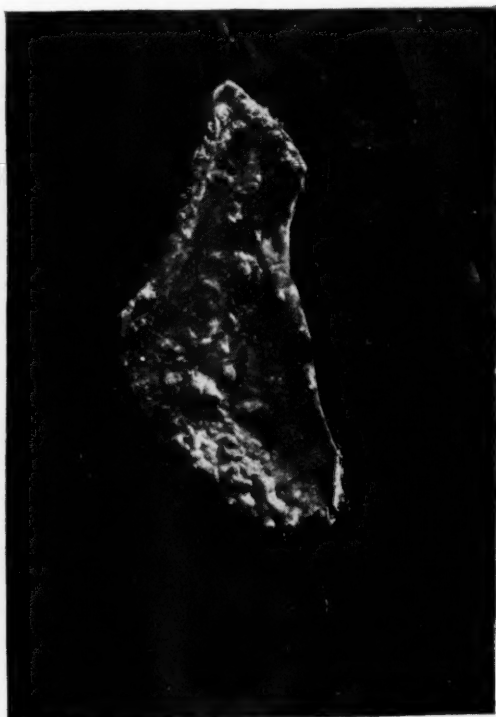
Cow No. 3.—This presented a similar view with an exceptionally dark spot in region of liver.

Cow No. 4 showed a clean unobstructed view, so clear that it enabled me to see the heart in action very distinctly.

My conclusions were that Cows No. 1, 2 and 3 would prove to be tuberculous, and Cow No. 4 free from tuberculosis. The subjects were then killed and inspected by myself and another Inspector of the Bureau of Animal Industry, who had purposely

not been informed of my conclusions. The post-mortem report is as follows :

In Cow No. 1 the mediastinal glands and the posterior por-



PHOTOGRAPH NO. 3.
Portion of Diaphragmatic Peritoneum with Tubercular lesions.

tion of the caudal lobe of the lungs showed tubercular areas.

In Cow No. 2 there existed generalized tuberculosis; there were tubercular lesions in the lungs, liver and over the entire pleura, but the lesions were small.

Cow No. 3 showed tuberculosis of lungs and liver. In this case the lesions existed to the largest extent, and especially so in the liver.

Cow No. 4 was entirely free from tuberculosis.

For a second experiment the subjects numbered three. They were good cows, in good condition, supposed to be healthy, considerably fatter than those of the first experiment. Here I ob-

served that adipose tissue does not decrease the penetrability of the rays. Upon fluoroscopic examination I judged cows Nos. 2 and 3 to be free from tuberculosis, but in subject No. 1, I noticed



RADIOGRAPH NO. 3.

Portion of Diaphragmatic Peritoneum with Tubercular lesions.

a faint opacity near the posterior extremity of the left caudal lobe, and concluded that there might be a slight tubercular deposit in that region, although the shadow was not so pronounced as in those cases of the first test, which were found to be tuberculous. Upon post-mortem examination cases Nos. 2 and 3 were found to be free from tuberculosis, and No. 1 showed in the very spot where I had detected the shadow, instead of tubercular deposits, lesions of a chronic circumscribed pleuritic inflammation with adhesions. The fact that even an indurated serous membrane throws a shadow, somewhat different from shadows of other anatomical parts, demonstrates the possibilities that might be attained by this method. This latter test taught

me also that fluoroscopy is an art of no small importance, in which one can only become proficient through practice. I noticed in this test that I was much better able to discern the different



PHOTOGRAPH NO. 4.

Portion of Thoracic Wall (with rib) with Tubercular lesions in the early stage.

shadows, as of the heart, ribs, liver, etc., than in the previous one, and although a case of tuberculosis in its earliest stages, where there is not a sufficiently appreciable calcareous infiltration present, might escape detection by examination with the X-ray in the living animal, an advanced case could not escape detection.

As this mode of diagnosis consumes only from 2 to 4 minutes for an animal at the utmost, it would recommend itself not only for ordinary diagnostic purposes, but particularly in ante-mortem work for meat inspection purposes. It would also be of great

value in diagnosing cases of tuberculosis far advanced, where the tuberculin test has failed to cause reaction; furthermore,



RADIOGRAPH NO. 4.

Portion of Thoracic Wall (with rib) with Tubercular lesions not far advanced.

could it be put to practical use in studying the age and progress of tubercular lesions in the living animal.

A TRADE PAPER devoted to carriages and automobiles states that while the year just closed has been one of marked activity in the automobile world, it has been financially disastrous, marked by failures and consolidations indicating unsatisfactory conditions. Speaking of the carriage trade, the same paper says the year was one of the most prosperous in the history of the business. Dealers in all classes of horses throughout the country state that trade generally was better than ever before, the only drawback being the difficulty in securing the right kind, which are constantly getting scarcer.

MOLASSES AS A FOOD FOR ARMY HORSES.

BY G. E. GRIFFIN, D. V. S., VET. ARTILLERY CORPS, U. S. A., FORT SHERIDAN, ILL.

While serving with the 5th Cavalry in Porto Rico, 1898 to 1901, it was observed that the natives used considerable molasses in the feeding of their ponies. On inquiring into the reasons we were informed that the corn of the country was small, hard, scarce and expensive, oats had to be imported, hay was an unknown quantity, it being practically impossible to cure grass in a country where the rainfall was so great and frequent, besides, as vegetation flourishes the year through, grass in large quantities was always obtainable, although of a coarse variety and containing 85 per cent. of water.

Grass as fed is cut early in the morning, made into bundles of from ten to fifteen pounds, transported on ox carts to the neighboring towns and there retailed for a small sum to the horse owners. An unlimited supply of this grass is allowed to the horse, it, however, being cut or chopped into short lengths first. In addition to this, where molasses is obtainable (and it is very plentiful in this sugar-raising country) and cheap enough, it is added to the drinking water and the animal allowed to partake of it in large quantities; all of the ponies do good work on this ration and endure surprisingly the hard usage and brutal abuse to which they are subject by the native Porto Rican and the Spaniard, who are seemingly devoid of mercy where horse-flesh is concerned. The question suggested itself, why not feed army animals in this manner?

Through the kindness of Colonel Clem, Chief Quartermaster of the then Department of Porto Rico, a money allowance of \$80 was placed at our disposal for the purchase of molasses for the purposes of the experiment.

Six troop horses and two private horses were selected for the feeding experiment, which was inaugurated on the first day of January, 1899, and continued until May 31, same year.

In carrying out the experiment I was ably assisted by a de-

tail of enlisted men in charge of Farrier Pagoda, of Troop L, 5th Cavalry.

On the appointed day the eight horses were weighed, pulse, temperature, respiration, secretions, etc., noted and recorded, also the condition of the teeth and general health, all of which were normal; selection of horses was made without discrimination, except that of the two private horses, one of which belonged to the adjutant of the regiment, the other to ourselves.

Commencing with the morning feed on January 1st, the oats ration was gradually decreased, and grass substituted at the rate of three pounds of grass for one of oats. Commencing on the 4th, the hay ration was gradually diminished and its place supplied with grass at the rate of two pounds of grass for one of hay. On the 6th, in addition to the grass, now amounting to twenty-one pounds a day (chopped), there was added, mixed therewith, three pounds of molasses. The hay and oats were partaken of eagerly, also the fresh grass, but that mixed with the molasses was absolutely refused, except by horse No. 2, which was very fond of candy or sugar. He, however, appeared to have trouble in its mastication, when it struck us that the molasses was not sufficiently diluted. At the next feed 25 per cent. of water was added to the molasses, when five of the animals commenced to eat gingerly. By the tenth of the month all of the horses were eating thirty-five pounds of grass and fourteen pounds of molasses daily, without the addition of any other feed whatsoever.

From the 7th to the 18th each horse lost in weight from 25 pounds in the case of No. 2 to 32 pounds in the case of No. 5. Contrary to expectations there was no relaxation of the bowels noticed; in fact, at a late period bran had to be given to overcome a partially constipated condition in all of the subjects; urine was clear and secreted in greater quantity than usual, but on test for sugar no reaction could be observed.

During this time each animal was doing the usual routine work of the garrison—drills, parades, scouts, horse exercise and patrols, amounting in all to about five or six miles a day.

On the morning of the 17th it was decided to give the animals a regular amount of work, consisting of twelve miles a day each, with saddle packed with soldiers' field kit, or its equivalent, which with the man averaged very nearly 203 pounds.

Animals were watered at 6 A. M., fed fifteen pounds of grass and seven pounds of molasses immediately afterwards; at 7.30 A. M. they were all saddled, and the detachment under our own direction (riding No. 2) proceeded thus: one mile walk, one mile regulation trot, one mile walk, one mile slow gallop, two miles walk, one mile fast gallop, one mile trot, two miles walk. Returning to the stable not earlier than 9.30 A. M., unsaddled, placed horses on picket line; water was offered at all of the numerous streams crossing the line of march while *en route*, but was refused except on rare occasions, and then partaken of only by the oldest animal in the detachment, No. 6, fifteen years old; water was offered at noon, but little partaken of; at 4.30 P. M. twenty pounds of grass and seven pounds of molasses were again fed; salt was offered twice a week, and about three ounces partaken of for the week; the molasses was diluted with 25 per cent. of water and mixed with the chopped grass as far as possible; where all could not be mixed it was dissolved in water and offered as a drink, which was partaken of during the night out of the bucket left in each manger.

Commencing with January the 20th all of the horses commenced to pick up, and by the 5th of February all of them had arrived at their original weight, and in some cases, notably No. 2, had surpassed it, with the exception of No. 6, the old horse, which regained his weight slowly. By the end of February all of the horses had increased in weight over the original from 35 to 68 pounds, the former in the case of No. 6, the latter No. 2. This increase was maintained or varied from very little throughout the experiment, except in the case of No. 6, the old horse, which slowly put on 52 pounds over the original. The work was continued daily, rain or shine, Sundays excepted, and in addition to this we were glad to let the horses out to garrison riding parties and for drills and parades, so long as it did not in-

terfere with the regular work, with the understanding, however, that no food should be offered while absent from the stable. In addition to this all of the horses were given a swim in the sea every Sunday afternoon for about half an hour with the object in view of washing off any molasses sticking to the coat. Grooming was only indulged in once a day, and that about four in the evening.

On April 18th No. 3 stumbled on a stone and strained the superficial flexor of the off fore, necessitating his remaining in the stable for seven days; during this time he gained 12 pounds in weight.

On April 29th a barrel of fermenting molasses was delivered in the evening; on the morning of the 30th this molasses was fed at the regular time. As the customary monthly muster was to be held at seven o'clock, the usual work was postponed until later and all of the horses turned out for this function; they behaved in a most scandalous manner, breaking up the ranks, smashing up things at the reviewing point and even dismounted the saddler sergeant, who was an expert horseman. Query: had the fermenting molasses anything to do with it?

Commencing with February 5th it was noticed that the fæces were becoming quite dry and that the animals had difficulty in defecating; to correct this we had to give a little bran on the 11th, which was partaken of greedily; it had the desired effect, and had to be repeated on an average of every two weeks.

It was noticed in Porto Rico that the young horses were those that kept the sick report full all of the time, while horses of seven and over were seldom reported, the trouble was usually of a digestive nature, with its consequent "out of condition" scratches, skin abrasions, etc. Four of these cases were chronic sick report horses and could not be braced with the usual drugs except for a few days. On February 3d all of them were suddenly deprived of their grain and hay and put on a ration of six pounds of molasses and twenty pounds of green grass daily; they refused the molasses for two days, but hunger being a fine stimulant to the appetite, on the morning of the 6th we were

gratified to see that everything had been cleaned up. (No, their teeth were not in poor condition ; we are positive of this, as we noted it on the record.) Strange to relate, these animals commenced to pick up immediately, and within ten days they improved so wonderfully that their riders failed to recognize them. These horses did their usual troop work, which was light. After living a month on this ration they were as suddenly returned to their hay and oats. Both of them suffered with indigestion for several days, but otherwise the sudden change was not injurious. We were under the impression that we would certainly have some acute digestive disorder on the sudden change from dry to green feed and molasses, but none appeared that could be observed. We were not surprised at the indigestion on going back to the dry feed.

All of the horses partaking of the molasses, including the four sick ones, improved in spirit, coat, condition, wind and flesh, and looked better than any of the other horses in the garrison. Remembering that they (the 8) accomplished considerably more work and under more unfavorable conditions apparently and that they probably received less grooming, the results as observed are certainly astonishing.

We will not go into the relative nutritive qualities of foods, as we are positive very few of those who peruse this would care to read it, but I will remark that the grass raised on the island of Porto Rico is very innutritious, consisting of little but water and cellulose ; as a consequence the pastured cattle are large of abdomen and watery and stringy of muscle ; the ox, which is the draft animal of the country, is fed the tops of the sugar cane and in many ways has his ration of the innutritious grasses added to.

On ending the experiment the horses were gradually restored to their usual ration of twelve pounds of oats and fourteen pounds of hay daily, which they ate greedily.

So much interest was shown in the experiment that not a single question was ever asked as to its results, or if molasses was of any value as a food for horses. As this is the first time

the result of the experiment has been put on paper, it may be of some interest to veterinarians. We do not claim originality for this ration, it having been in constant use on the island of Porto Rico from time immemorial.

Conclusions.—Army horses in the West Indies when the regular ration is not obtainable can be subsisted without loss of flesh or vitality on grass and molasses, both of which are cheap and easily obtainable. The average price per day for the grass and molasses ration was fifteen cents, that of the regular ration about twenty-seven cents; the price of molasses depends upon the season, it being cheapest when the cane is being ground.

Thirty-five pounds of grass and from thirteen to fifteen pounds of molasses as a daily allowance is sufficient to maintain a horse of one thousand pounds weight in good working condition in a climate similar to that of Porto Rico.

On this ration animals appear to do more work, condition and coat improve; there is less tendency to perspiration, wind decidedly improved, urine increased but slightly, bowels have a tendency to constipation, which is easily corrected by the feeding of a few pounds of bran at stated intervals.

Sudden change from dry to this ration is not at all injurious and does not derange the digestive apparatus. On changing to a dry ration it should be done gradually or serious consequences may arise.

Molasses attracts insects, notably flies and ants; it sticks to the animal's coat, smears his face and breast, halter and halter strap, soils the clothing and equipment of the men and causes some trouble and delay in mixing it with the grass, which must be cut fine. It is believed that molasses in small quantities in the United States could be used to good advantage in the treatment of sick horses recovering from some debilitating disease, also in cases of animals suffering from dyspepsia, where the coat is rough and skin harsh and tight, as well as in horses with chronic indigestion that will not respond to the usual tonics.

If molasses as a feed or partial feed be used by any of your readers with a therapeutical object in view it is hoped he will place the result of his observations at the disposal of the REVIEW.

SOME FURTHER REMARKS ON "SURRA."

BY COLEMAN NOCKOLDS, 1ST CLASS VET., 1ST CAVALRY, U. S. ARMY,
BATANGAS, P. I.

Since remarking that this disease had broken out among the army transport and cavalry animals, I have been able to investigate it more thoroughly, owing to the immense number of animals that have been attacked and are at the present time suffering from it. Some idea may be formed of the enormous loss of life it has and is incurring when it is known that under my observation alone out of one engineer's train of eighty-five mules, seventy-six have already succumbed and thirty-one out of another train of forty animals have died, and the remainder are seriously affected with this very deadly disease. Besides, there are an alarming number of troop horses and quartermaster's animals that have died or are dying. Horses are not as liable to "Surra" as are mules, as the proportion of deaths is about one horse to ten mules. I am fully convinced that the organism is introduced into the system by the ingestion of grass cut from swampy lands, which is almost the only forage obtainable here at this time, as American hay and grain are scarce. No doubt at some stations the water used for drinking purposes infects animals, but that is not the case here because our water supply is obtained from the ice plant and is free from the organisms. It is certain that flies, and possibly other insects, carry the disease from one animal to another; this has been demonstrated to my satisfaction. That the blood of infected animals contains the specific hæmatozoon is also positive, as I have found them in the blood of many affected animals; also that the blood from infected horses when injected into a healthy animal will cause the disease, I have demonstrated by inoculating a number of monkeys and dogs. The most remarkable thing to me is that of all the veterinarians that I have met out here and that various officers I have conversed with in Surra-stricken districts know nothing of the disease, and confess that they have never heard of it; some have had large numbers destroyed because they sus-

pected glanders ; others call it tropical fever and are satisfied. It may be of benefit, especially to those veterinarians contemplating entering the army, to go over the symptoms again. As to the cause, as is well known, it is an infusorian called the *Trypanosoma Evansi*, named after G. Evans, M. D., an inspecting veterinary surgeon in the British service, who first noticed the parasite in the blood of infected horses in India during 1880 ; so it is not a new disease, although apparently new to many American veterinarians who have not been able to obtain literature on the subject. It is a flagellated infusorian measuring from 20 to 45 micrometers in length and 1 to 1.5 in breadth at its widest part ; it has a long, slender and flexible tail and is very motile, going in and out amongst the blood cells, which they destroy with an eel-like movement. The first well marked sign of this disease is an increasing emaciation with loss of strength ; all the symptoms of a progressive anæmia are apparent in a few days ; in the majority of cases there will be noticed swelling of the under part of the abdomen, sheath and legs, due to œdema ; and paroxysms, during which the animal lays down and struggles, and it will be found upon examination that the temperature has risen three or four degrees, averaging 39.4 to 40.5 C. ; these last for from a few minutes when first attacked to several hours towards the later stages of the disease ; between paroxysms, intermissions occur of comparative quietude, during which the temperature may be slightly elevated, normal or even below normal. One of the most noticeable manifestations is that the appetite is ravenous even during a paroxysm, no doubt because of the parasites assimilating most of the nutriment in the system required for the maintenance of the vital forces. As the disease progresses the countenance assumes a timid, tired expression, while in the standing posture the back is arched and the head hangs low, when attempting to move the legs drag, there is knuckling of the fetlocks and the rump is low. Extreme pallor of the mucous membranes is a constant symptom, and petechiæ is often present upon the conjunctiva and schneiderian membrane. I have not noticed an urticarial eruption mentioned by some ob-

servers, but in some instances small swellings caused by insect bites occur. Blindness, due to the extravasation of blood into the chambers of the eye, is occasionally noticed. The urine is voided frequently, often of a dark red color, again it may dribble away even when the animal is lying down. In most cases the body is covered by small specks of blood due to insect bites. The bowels are normal. Animals may be attacked under any or all conditions.

Post-mortem.—Body much emaciated, muscles pale, large amount of jelly-like exudation in connective tissues, intestines bloodless, but normal in consistency. Liver enlarged, friable and pale. Spleen slightly enlarged and softer than normal. Kidneys enlarged, always paler and in some cases soft, easily torn, mottled and capsule non-adherent, cortex containing pus. Bladder normal. Heart atrophied but apparently larger in size from fatty infiltration. Muscles pale and auricles and ventricles contain large yellow clots, as also do the large veins. Lungs congested, leathery, only partially aerated and mottled by irregular patches of red and yellow hepatization, hepatized portions containing pus and fibrine and are nodular. Stomach is *not ulcerated*, but full of food; may or may not contain bots, and in most cases there will be seen amongst the food myriads of small thread-like white worms from 10 mm. to 15 mm. long. In the peritoneal cavity there are generally found numbers of white worms 6 cm. to 12 cm. in length, most probably the *Filaria papilosa*. In the cæcum and large colon most probably many of the *Otyuris Curvula* will be seen.

All the parenchymatous organs have undergone fatty degeneration to a greater or lesser extent. There is yet much to be learned as regards the best method of treatment for this disease. I have given Lingard's treatment in a large number of cases without any beneficial result, as the animals have all died; some that were put on quinine and iron recovered, as did also several that had quinine and iron combined with the arsenic treatment. Injections into the larger muscles, preferably the gluteal, of a solution of mercuric chloride have proved beneficial.

It is of the utmost importance that all infected animals should be placed in quarantine at a safe distance from the healthy animals, because of the danger of transmission by flies and other insects. Of course, no treatment will be of avail unless the feed is changed and water free from the organism be used for drinking or other purposes around the animals.

Shelter at night to guard against the sudden changes of temperature and dew which occur in the tropics. The appetite is invariably good and the animal should have plenty of food of the best quality obtainable. Puncturing the swellings is not of benefit, at least until it is apparent that the patient has recovered from the actual disease.

Anti-parasitides might be of benefit applied directly to the skin to prevent as much as possible flies or other insects resting there.

IN THE INTEREST OF SCIENCE.—When one's friend is a scientist and given to experiments a little caution may not be out of place before consenting to do him a favor. That, however, did not occur to a certain well-known public man whose experience is related in an Australian paper. He went to the laboratory of an old schoolmate, a Melbourne professor of chemistry, to make a friendly call. The professor was studying a dark brown substance spread out on a sheet of paper. "I say," he cried, when greetings had been exchanged, "would you kindly let me place a bit of this on your tongue? My taste has become vitiated by trying all sorts of things." "Certainly," responded the accommodating friend, and he promptly opened his mouth. The professor took up some of the substance under analysis and put it on his friend's tongue. The man worked it around in his mouth for fully a minute, tasting it much as he might have tasted a choice confection. "Note any effect?" asked the professor. "No, none." "It doesn't paralyze or prick your tongue?" "Not that I can detect." "I thought not. There are no alkaloids in it, then. How does it taste?" "Bitter as gall." "Hem-m-m! All right." By this time the visitor's curiosity was aroused. "But what is it, anyhow?" he inquired. "I don't know. That's what I'm trying to find out. Some one has been poisoning horses with it."—(*Youth's Companion*.)

POLITICAL VETERINARIANISM IN ILLINOIS.

BY T. J. GUNNING, NEPONSET, ILL.

Presidential Address delivered before the Illinois State Veterinary Medical Association at Chicago, Nov. 14, 1901.

Gentlemen:—

Another year has passed since last we met together at the annual meeting of this association. The past year, like all other years, has brought joy to some and sorrow to others. It is only a few weeks since our great nation was called to mourn the loss of its chief executive, a man greatly beloved by all except by the Anarchist. Surrounded by his fellow-citizens, vying with each other to show him honor, he was laid low by the assassin's bullet, and the name of Wm. McKinley was added to the list of martyred Presidents. And while we bow in humble submission to the will of the Almighty, and mourn the loss of one so grand and noble, let us not forget to render thanks to Him who doeth all things well.

We have just reasons to be thankful, when we remember that during the past year none of our members have been called from time to eternity and our ranks remain unbroken.

Gentlemen, I wish to acknowledge my indebtedness to our worthy Secretary for the able support he has given me during the past year. I can assure you that had it not been for his untiring efforts, his planning, pleading and begging, the programme of this meeting would not present such an array of well-known names, which is a guarantee that we will receive papers of interest to all.

The office of Secretary should be filled by the best man in the association, and I can assure you that there was no mistake made when Dr. Welch was chosen our Secretary, but like some political parties the mistake was made at the head of the ticket, and I trust that you will profit by the present experience and do better in the future in selecting a man to act as your President.

During the past year there has been no serious outbreak of contagious or infectious disease in the State, so far as I have

been informed, unless it be influenza, which has been quite prevalent, but of a mild form, the death rate being quite small, most of the deaths occurring in neglected cases. Where there has been any outbreak of disease it has been confined to a small section of the State. Some of these local outbreaks have not been reported. Many of the stockmen of the State have lost all confidence in the work done by the State the past four years and will not consent to State interference if they can prevent it.

The past year has been one of prosperity for the veterinarian as well as the stockmen of the State. The advanced price of live stock has made owners of stock more interested in caring for their sick animals, and money being quite plentiful the doctor has received more cash for his work and fewer accounts to charge and collect in the future.

The prosperity enjoyed by the profession during the past two years will, undoubtedly, cause many of the young men to start in the work of educating themselves for the profession, notwithstanding the fact that the Governors of this State persist in refusing to recognize the graduated veterinarian. Our colleges will receive more or less benefit from the present prosperity, by a larger number of students, and the colleges offering the most complete course of study and receiving the most public recognition will, without doubt, receive the largest number of students. Our colleges should be the standard-bearers of the profession and should at all times refuse to recognize any man or class of men, who, by word or deed, strive to cast any reflection on the colleges or their graduates.

The work of our colleges and the persistent work of scientific men in the past few years have elevated the scientific knowledge of the profession to a place worthy of the highest recognition of every American citizen.

Gentlemen, as President of this association, I feel that there is a duty resting upon me—a duty that I would gladly shun, if by so doing I could feel that I was doing my duty to our profession. The duty that I refer to is the standing of our profession in this State, and I can assure you that if I did not feel it

my duty to make a few remarks along this line I would gladly pass it by, and I can assure you that what I have to say, I say it with true brotherly love and due respect for all.

I trust that the time is not far distant when every graduate in this State will be bound together in one great professional brotherhood, thinking not of self alone, but the good of all. The profession in this State at the present time reminds me very much of a house divided against itself. What the outcome of this division will be, it is not for me to say; but I trust that the divided parts may again be bound together for the good of all.

Something over four years ago the Governor of this State appointed to the office of State veterinarian a gentleman who was a non-graduate, a gentleman who, only a short time before his appointment, took occasion, in my presence, to denounce the veterinary colleges of this country as unworthy of recognition, and I took it for granted that he did not hold the graduates in any higher esteem than the colleges from which they were graduated. Only a short time after his appointment he was in Chicago knocking at the doors of the veterinary colleges asking them to recognize him, and I have been informed that there was one of the veterinary colleges that gave him the recognition he desired and which, I have no doubt, he so much needed. While the other college was perfectly willing to recognize him as an honorable gentleman, but not as a professional man, and by so doing placed a wreath around it, which neither the scorching sun of summer nor the chilling blasts of winter will be able to wither.

At the time of this appointment it was freely admitted by State officials at Springfield, that if the graduated veterinarians of this State refused to do State work under this appointment the State work could not be carried on, but if enough graduates could be found who would condescend to do State work it would make but little difference who held the office of State veterinarian. Notwithstanding the fact that a large number of graduates refused to do State work, there were plenty who

seemed not only willing but anxious to have an appointment to do State work. The veterinary profession was in no way to blame for the first appointment of a non-graduate, the blame resting with a few of the political wire-pullers of the Republican party, but for the second appointment the graduates who made it possible for a non-graduate to hold the office are alone responsible, for by their work they have made it possible for any man to hold the office that a few wire-pullers may see fit to name.

During the past winter quite a number of graduates came out as candidates for the office of State veterinarian, men who would have been an honor to the office and to the profession, and, after obtaining endorsements of which they might feel justly proud, were each and all passed by without the least recognition. Some of these men had been serving the State for nearly four years, and after four years of work succeeded in doing just what they had been working for, their own defeat, and I can assure you that I regret their defeat perhaps more than they do. It seems to me that if those men had been just a little better posted on politics there would have been very few candidates in the field. For it was a foregone conclusion at the time the present Governor received the nomination that if elected no graduate would be appointed.

There was never any doubt as to where the Democratic party or its candidates stood in regard to the appointment of a State veterinarian. But, strange as it may seem, out of the four candidates of the Republican party, there was only one who dared to say one word as to where he stood on the appointment of State veterinarian, and I take pleasure in saying that the one Republican candidate who spoke with no uncertain sound for our schools and for the veterinary graduates of medicine and surgery was Hon. Judge Carter, of Chicago. And I wish to say to you that if this meeting adjourns without giving a vote of thanks to the defeated Democratic nominee and to Judge Carter, it will adjourn without showing due respect for the men who were ready and willing to give just recognition to the graduates of this State.

It would be a gross injustice to the present State veterinarian to say, as some have said, that he had no right to accept the office. He had the same right and privilege as any other citizen of this State, and just so long as he can find men who are willing to kneel at his footstool he is likely to hold his present office, and I shall be the last to criticise him for so doing.

Gentlemen, let me ask you how long you think the State work could be carried on if every graduate who is now doing State work would refuse to work and all other graduates do likewise? Let me say to you that it would not be forty-eight hours until there would be a few men at Springfield hunting for the point of the compass to find out "where they were at," and during that forty-eight hours the profession would rise to a place of honor and recognition such as it never has known in the State.

Gentlemen, in the course of my remarks I may have said some things that would ruffle the feathers of some brother practitioner, but I believe that friendly criticism will often do more good than cowardly silence. I wish to say to you to-day that just so long as the graduates of this State are willing to submit to the dictates of political wire-pullers, our colleges and our profession will never receive just recognition.

The live-stock interests of this State are ready and willing to do us justice and lend friendly assistance at any time, but we must first show that we stand united and are making a strong pull and a pull altogether for the good of each and all.

I hope that the day is not far distant when every graduate in this State will stand under one banner and take as their watchword:

"We live for those who love us,
For those who know us true,
For the wrongs that need resistance,
For the rights that need assistance,
For the future in the distance,
And the good that we can do."

AN ENZOOTIC ATTACK OF CHOREA AMONG CATTLE.

BY A. D. KNOWLES, VETERINARIAN, NEVADA, MO.

Read before the 10th Annual Meeting of the Missouri Veterinary Medical Association,
October 22 and 23, 1901.

About September 20th, 1900, I was on the farm of a Mr. Arnold vaccinating some cattle, and my attention was called to a grade polled Angus heifer about a year and a half old. She stood among a bunch of cattle on the opposite side of the lot with her head turned toward us; the head was moving from side to side and in a rotary motion; the eyes staring; the front feet extended, as if to prevent falling forward; the hind legs also placed in a bracing position, and the animal was very nervous.

When I approached her she started excitedly stepping high, the front feet almost touching her ears, and after going a few steps she fell on her side in a state of eclampsia; I approached and found her trembling, with eyes rolled back; respiration and pulse very rapid; I did not take temperature at that time, but found on later examinations that the temperature was elevated from one to three degrees. After leaving her for a few minutes, she arose and passed along the opposite side of the lot with that same unsteady gait, frequently falling forward.

I was informed by Mr. Arnold that he had had cattle affected like her for four previous years, that it usually made its appearance in October and lasted several weeks; and that he had never lost one showing the symptoms; he said he had had the services of veterinarians before, but that they had failed to successfully treat the affection.

I was on Mr. Arnold's farm several times during the autumn and winter and saw about seventy-five head of his herd of two hundred and fifty cattle show the symptoms as just described; the affected cattle would continue to eat and thrive, but would frequently fall, while suffering from the spasms, into ditch or creek and be unable to rise until helped.

The only one that Mr. Arnold has lost, while showing the symptoms, was a steer about a year and one-half old, which had fallen into a ditch on the night of the 3d of January, 1901, everything indicated that the animal chilled to death while lying on his back in the ditch.

I held an autopsy about thirty-six hours after death and found the following conditions present:

The body showed no signs of decomposition and there was no tympanites; the post-mortem was held by the field operation, exposing all of the internal viscera as a whole, after which the contents of the intestines, stomach and bladder were exposed; then we examined carefully the external and internal conditions of the heart, lungs, liver, kidneys and spleen.

There was nothing to indicate disease or abnormality until the cranial cavity was reached.

Upon opening that cavity the dura mater and arachnoid showed nothing characteristic, but there seemed to be much more than the normal quantity of the subarachnoid fluid and the vessels of the pia mater were greatly distended with blood; there was nothing else to attract especial attention.

There were a greater number of cattle affected on Mr. Arnold's farm last year than there has been any previous year.

Mr. Arnold has had sheep, which he says have shown the same symptoms, and he thinks some have died from the affection.

The farm referred to lies in the north part of Vernon County, Mo., and is composed of about eight hundred acres of black limestone soil; it is all set to timothy, clover and English blue grass.

The farm is exceptionally clear of weeds and brush, except forty acres, of which I shall speak later; there is a creek running through the farm from south to north, but the cattle receive water mostly from tanks fed by large ponds, and the water supply in the tanks is regulated by floating valves; the ponds are all fenced so that no stock can get to them. The pasture was excellent, and the cattle did not receive any grain or hay until

after the first of January, except two carloads of two-year-old steers which were being fed for the market, but those receiving no grain remained in splendid condition.

The forty acres referred to is fenced to itself and is not used during the summer, but is allowed to grow up in brush and weeds, and is used as a wind-break for winter.

On one occasion about seventy-five head of cows and young cattle got into this enclosure and within three days about twenty head were showing the symptoms; some were not able to stand for a few days, and others had to be pulled from ditches or creeks occasionally; during the time these cattle were so badly affected they continued to eat and digest their food. The cattle were removed from that pasture and some of the affected ones improved rapidly, while others continued in about the same condition for several months.

On March 22, 1901, I accompanied our State veterinarian to the Arnold farm; there were several cattle still affected, and as thorough an investigation as could be made in one day was made by Dr. Luckey.

Plans were laid to gain more knowledge of the affection, but as the grass came on the cattle gradually grew better, until by the first of May there was not an animal showing perceptible symptoms.

The grade polled Angus heifer I spoke of as being first affected did not make permanent improvement until spring, but like all of the others she showed signs of improvement, to be succeeded by periods of the most aggravated symptoms; after the grass was good in the spring she gradually regained her normal actions and was shipped to market about the middle of the summer, apparently having made as good a growth as though she had never been affected.

There was no treatment recommended for the cattle, and none was given, except that Mr. Arnold on his own judgment gave treatment to two cattle similarly affected. One of them received full doses of iodide of potassium, and the other full doses of the bromide, twice daily for a week.

The one which received the iodide, he said, seemed to improve considerably for a week following the treatment, when it grew worse again; the one which received the bromide did not show any change of symptoms. There were other cattle in the same neighborhood affected and showed the same symptoms.

Mr. Arnold has his cattle graded and keeps each grade in a pasture to itself; and a very noticeable fact is that cattle that were on pasture which was used for meadow, *i. e.*, that was mowed and then pastured after the grass came up sufficiently, did not show any of the above symptoms while they were confined on such pasture, but when moved from that on to land which had been used for pasture the entire season, quickly developed the symptoms.

Cattle of all ages were affected, also some of those on full feed of grain, but those on grain were also on grass.

The symptoms developed earlier and lasted longer last year than any previous year.

Mr. Arnold has no cattle affected as yet this year.

I hope this paper will stimulate a discussion which will give new thoughts and more knowledge on the subject.

THE exportation of horses and mules from the port of New Orleans is the largest ever made by any single seaport in the history of the world. From Oct. 1, 1899, to Nov. 30, 1901, the total valuation of horse and mule cargoes was \$13,483,052, exclusive of feed, which amounted to \$992,619, making a grand total of \$14,476,270. The total number of horses and mules was 140,050, about equally divided. The average value of the horses and mules shipped to South Africa will thus be seen to amount to \$96.27, and when we reflect upon the market price of horses in this country since 1899 we can judge of the class of animal that has been bought and shipped for "war purposes." We can thus be thankful to the British Government for ridding this country of its "scrub" stock.

A HORSE taken to the Philippines by the United States Government for military purposes costs about \$600 when he lands upon that soil. The necessity for the best veterinary care thus becomes most apparent.

SCHMIDT TREATMENT FOR PARTURIENT PARESIS.

BY J. C. CALLANDER, V. S., PARKERSBURG, W. VA.

For some time I have been thinking that perhaps it was my duty to my fellow practitioners that I should record my way of using the Schmidt treatment in parturient paresis, and tell of the success I have had with its use.

I have been in active practice for about 13 years, and have always dreaded the so-called cases of parturient apoplexy. If I was called to a sick cow, a common question for me to ask was: "How does she act?" The owner usually would say: "Well, she was fresh yesterday morning; now she is down and can't get up. Hurry up or she will be dead before you get here." I would say to myself, "I hope she will be." Of course I would go, and use the old line of treatment. Sometimes, to my surprise, she would get better, if she had strength to withstand my treatment and the disease combined. Usually I had to hear the same old song—"She died last night." Now the tune has changed.

I keep a quart sterilized bottle and rubber funnel with piece of tubing attached, and at the end of it a silver milking tube; also one ounce of iodide of potassium in two ounces of distilled water. In another small bottle equal parts of acid carbolic and glycerine. All this I keep in a box in the same place ready for use. When at my destination I ask to have a quart of water boiled. This I put into my sterilized bottle—adding one-half of my iodide solution and two drachms of carbolic acid and glycerine solution. I set bottle in cold water and allow it to cool to blood heat. I then prepare the udder by milking out and washing it with carbolic or sublimate solution. Then I insert tube; have an assistant pour a quarter of the solution into each teat. This being done, I massage the udder fairly roughly for five minutes. Place animal on sternum, with fore and hind feet in natural position, with head turned to side. Give instructions to keep her in that position and turn her from side to side every two hours. Also, to milk all that

they can get every two hours after injection. I catheterize her, and leave, returning in six hours and go through same process. I am not surprised to hear of her being on her feet within the next six hours. If she is not I give the third injection, which with me has always brought the happy result. She gets no medicine by the mouth nor hypodermically. I rely altogether on the udder injection. So far I have not lost a case.

What was repulsive to me once is now pleasant. You will notice, my iodide dose is four drachms, which is double the dose given by the author of the treatment. I also use one drachm of carbolic acid and same of glycerine. The glycerine, I do not claim to have any merit, only it helps to put the acid in a more uniform solution.

I could go over my cases and give you day and data with usual differences we observe in these cases; but they are the same after all, and don't need any other treatment.

In about half the cases, I use but two injections, but about as often need three. Have had no bad effects in udder. They return to normal flow of milk in about a week. In my opinion carbolic acid is as necessary as the potassium.

I hope your readers may find a little that is new and something that is helpful in this feeble article of mine.

THE CHICAGO STOCK YARDS.—In 1866, the total value of the animals received at the yards, was \$42,765,328; in 1901, it was \$283,955,239. During the past thirty-six years 323,628,855 head of stock of all kinds were received, and 100,487,619 shipped out. The grand total number of head handled by the corporation since the opening of the yards, stands 424,116,474. There are 500 acres in the plant, of which 450 acres are bricked or planked. Pens to the number of 13,000 are available; double-decked or covered pens exist to the number of 8500. The water consumed on hot days reaches 7,000,000 gallons.

AN agitation as to the unclean and unwholesome condition of the milk furnished to New York is now being carried on through the press, and many propositions are being discussed for its betterment. Nathan Straus, who has for some years been distributing pasteurized milk to Gotham's poor, is enthusiastic for that process for all milk sold.

REPORTS OF CASES.

"Careful observation makes a skillful practitioner, but his skill dies with him. By recording his observations, he adds to the knowledge of his profession, and assists by his facts in building up the solid edifice of pathological science."

CLINICAL NOTES ON INHALATION BRONCHITIS AND PNEUMONIA.

By W. L. WILLIAMS, New York State Veterinary College.

I. (3081).—*Inhalation Pneumonia due to Fixation of the Tongue by an Osseous Tumor.*

Patient a small common-bred bay mare, aged 10 years, in bad general condition. The owner had noted from time to time during 2 or 3 years some fetor of the breath and disturbance of respiration, which were attributed to some dental affection. There was also some nasal discharge and dribbling of saliva from the mouth. On March 20, 1901, the patient was driven 15 miles over a bad road in a sleet storm, and on the 21st was presented at the clinic showing the following symptoms. Pulse 60, temperature 102° F., respiration labored, auscultation revealed crepitation in the lower fourth of the right lung, the same part being dull on percussion. The patient responded promptly to ordinary treatment and on April 3d had sufficiently recovered to warrant an examination for the trouble preceding the pneumonia.

The teeth and alveoli were found normal. The tongue was rigidly fixed in the intermaxillary space, the tip was slightly movable from side to side and somewhat extensible, but this mobility was anterior to the frænum linguæ. Palpation of the tongue revealed the presence of a hard body, elongated in form and parallel to the long axis of the organ. Its superior border was located some distance beneath the dorsal surface of the tongue, while the inferior disappeared deeply between the rami of the inferior maxilla. The anterior border was co-extensive with the frænum linguæ, and by raising the tongue apex and turning it backward the hard body projected forward prominently, so much so that it was suggested that it was a foreign body which had entered the lingual tissues at this point and had become encysted. The anterior end reminded one, in its outline, of a butcher's skewer, and projected very prominently, though the mucosa was intact. The hard body could be traced back several inches and seemed immovably fixed in the

lingual tissues, while the tongue and foreign body together could be slightly moved from side to side.

An incision onto the projecting anterior portion revealed, not a foreign body, but an osseous new formation with which the surrounding soft tissues were intimately blended, rendering its separation more difficult from the surrounding parts than in case of normal bone with periosteum. Its separation proved quite tedious, and was finally accomplished by making an incision upward from below through the intermaxillary space about 3 inches long, and through this opening detaching the bone by cutting the soft parts away with a scalpel, and finally withdrew the neoplasm through the inferior opening. Viewed laterally the neoplasm is an irregular parallelogram, $2\frac{3}{4}$ inches long, 1 inch wide, and $\frac{3}{16}$ inch in diameter. This had developed apparently in the median raphe of the tongue, its long diameter corresponding to that of the tongue, so that it stood up vomer-like in that organ, and being firmly fixed below served to prevent the normal movements in the affected organ, interfering seriously with mastication, because the food could not be guided between the grinders, causing particles of food to remain in the mouth to undergo decomposition; and rendering deglutition difficult and unsafe, leading to the inhalation of food particles, and finally causing pneumonia.

II.—*Cystic Tumor (Retention Cyst) of Epiglottis—Chronic Suppurative Bronchitis—Staphylotomy—Ecrasement of Tumor—Tracheotomy—Atresia of Trachea from Infection of Tracheal Wound—Intubation.*

Patient a sorrel gelding, 16 hands high, weighing 1100 lbs., about 8 years old, presented because of a chronic cough and abundant nasal discharge.

History: The horse had, for several years, been in the hands of cheap horse traders and had changed owners so frequently as to render the securing of any reliable data impossible. There was evidence to show that the malady was of, at least, two years duration. He had been in possession of the party presenting him at clinic for a few weeks, the condition remaining approximately uniform during that period.

Presented on January 3, 1901, the general appearance of the patient was good, the appetite undisturbed, was in fair flesh and competent to perform a moderate amount of labor, but there was an abundant nasal discharge of a rather thin flocculent, muco-purulent character and a frequent cough accompanied by the copious discharge per mouth of the same muco-purulent

character as that emanating from the nostrils. Manual exploration revealed a large firm tumor situated between the base of the tongue and of the epiglottis. The animal was secured upon the operating table, chloroform anæsthesia produced, and tracheotomy performed in order to guard against the inhalation of blood or other substances during the removal of the tumor. The operator, Dr. G. T. Stone, found difficulty in manipulating the tumor, and in order to secure more room, staphylotomy, or division of the soft palate along its median raphe was performed, which greatly increased the room and facilitated the chief operation. The tumor was then removed by ecrasement, the mare spaying ecraseur being found very convenient on account of its length. There was no hæmorrhage worthy of note.

The tumor is spherical in form, three inches in diameter, tense and fluctuating. After fixing in formalin a perpendicular section shows it to be a multilocular retention cyst, the contents of which have coagulated firmly and are easily detached from the cyst walls. The greater portion of the tumor consists of a single cyst about 2×3 inches in diameter with three smaller cysts at the base varying from $\frac{1}{2}$ to 1 inch in diameter. When the animal had recovered from the anæsthesia the trachea and bronchi were freely flushed out with a solution of hydrogen peroxide introduced through the tracheotomy tube.

On January 4 there was moderate febrile reaction after the operation, the temperature reaching 103.5°F. , declining daily until on January 8th it had reached 100.8°F. The general appearance of the patient was immediately benefitted, the cough and bronchial discharge abating rapidly. The trachea and bronchi were flushed out daily with hydrogen peroxide solution, using for each washing 5 liters of water at 37°C. , to which was added 5 grammes sod. chlor. and 60 cc. commercial peroxide of hydrogen.

The patient was discharged January 12, and on January 18 was returned on account of an abscess at the point where tracheotomy was performed, the pus collecting between the trachea and the sterno-thyro-hyoideus muscle.

The abscess was opened freely, disinfectants applied and the patient returned home.

Patient returned May 1st because of dyspnœa and showing a large, firm swelling 8 to 10 in. long and 5 or 6 in. thick over the tracheal wound. This was opened down to the trachea by means of a median incision as long as the tumor, and reopening

the trachea it was found almost filled up for a distance of 3 or 4 in. from granulations growing from the wound area. The swelling was very hard, indurated and partook of the general features of the so-called botryomycosis. It was accordingly treated with tincture of iodine locally and potassium iodide internally, responding very promptly, the swelling disappearing, and the induration softening.

It appeared, however, that the trachea would again close unless some mechanical obstacle to atresia were permanently fixed in it, and to meet this requirement we had made a silver tube $1\frac{3}{4}$ in. in diameter and 4 in. long. On the inferior face of the tube two silver strips $\frac{3}{8}$ in. wide and 4 in. long were soldered at right angles to the tube, the two strips being 1 in. apart equidistant on either side of the middle of the tube. These strips were attached as a precaution to avoid the possible slipping of the tube up or down the trachea. The silver used was 925-1000 fine. This tube was inserted in the trachea after making a sufficient longitudinal incision, some retaining sutures taken across the tube and the two strips were bent at right angles beyond the indurated tissues. The operative wound closed with moderate rapidity and the horse returned to work on May 25.

On June third the patient was again presented at the clinic, the cough and bronchial discharge had almost wholly disappeared, the swelling at the seat of the tracheal wound had largely vanished, and there was only slight suppuration about the silver bands attached to the tracheal tube. The latter, which were 4 in. long at first, were now cut off close to the skin, about $\frac{3}{4}$ in. from the tube. The horse was not seen by us after this date, but continued to work and kept in good condition for a time.

The owner related that some weeks subsequently the bronchial discharge and cough returned, and with it a very foetid odor. Again he was traded, and the discharge and odor creating alarm he was destroyed because of suspicion of glanders.

The case presents many interesting features. The presence of the tumor between the tongue and epiglottis, with its necessary interference with the functions of the soft palate and with deglutition doubtless induced the inhalation of substances which led to the chronic muco-purulent bronchitis. The resort to longitudinal division of the soft palate prior to the removal of the tumor demonstrated quite clearly to the operator (Dr. Stone) the value of staphylotomy as a preparatory op-

eration in cases demanding surgical interference within the pharynx, or far back in the mouth where the soft palate is in the operator's way.

The value of voluminous intratracheal injections in washing out the bronchi was very evident, the muco-purulent discharge from the trachea ceasing very promptly and remaining in abeyance until shortly prior to the destruction of the animal, when new causes arose to bring about a recurrence of the malady.

The danger from tracheotomy in the presence of suppurative bronchitis is strongly emphasized, for while the operation and handling of the wound were accompanied by the usual precautions against serious infection they were evidently insufficient and the ineffectiveness of these ultimately led indirectly to the death of the patient.

An autopsy could not be had, and efforts to recover the silver tube failed, but judging from other data coming into our possession after the operation and death, a serious error was made in the material composing our trachea tube because of its destructability in contact with the tissues, and the consequent irritation to the parts inducing suppuration and ulceration of the contiguous parts, while the discharges therefrom entering the bronchi aroused anew the previous muco-purulent bronchitis and nasal discharge. The silver used in making the tube was represented to us as 925-1000 pure. A somewhat similar tube of the same degree of purity, fixed in the trachea of a horse by us and kept in position for 28 months was found on removal to be greatly eroded, roughened, at some points completely destroyed, losing on the whole approximately $\frac{1}{2}$ its weight. Whether this was due directly to the destruction of the metal or indirectly to the solution of the alloy in the metal has not been determined. Apparently all constituents of the metal have suffered alike. The tube at least shows that silver apparatus 925-1000 fine is not suitable for permanent fixation in the air passages of the horse, as it will gradually erode and irritate the contiguous parts.

ACUTE RHEUMATISM IN HORSE.*

By T. J. MENESTRINA, M. D. C., St. Louis, Mo.

My subject this time is "Acute Rheumatism of the Horse." Quite often we are called to a case of lameness, a very obscure

* Read before the 10th Annual Meeting of the Missouri Veterinary Med. Assn., Oct. 22 and 23, 1901.

one, no history of any kind. We endeavor to find the seat of the lameness and attempt to treat same with fomentation or liniments, only to find the lameness still there or perhaps worse after several days, or about this time travelled to another limb. I illustrate to you, gentlemen, a case and my observations.

A black gelding, 6 years old, a very stylish animal (the owner a very reckless driver), went suddenly lame on right front leg. No history to the case. I prescribed a liniment to be applied to the shoulder, and after a few days the animal was no better. I then applied a seton; after two weeks I found the lameness entirely gone on that side, but the horse went suddenly lame on the other limb. I then came to the conclusion that it was rheumatic. The thermometer ran up to 103° , pulse large; rapid; respiration accelerated. I then prescribed the usual treatment: saline purgative, followed by full doses of belladonna, colchicum, salicylate of soda. I returned the next morning and found the animal down, unable to get up, in a profuse perspiration, temperature 105 , bowels very inactive and urine scanty. He got up with a little help, only to remain so for about five minutes. The appearance while up resembled that of a foundered horse. I prescribed antispasmodics again.

The very same night he was much easier, temperature 104 . The next morning found the animal the same. I then changed the treatment. I gave salol in one drachm doses every two hours. I kept up this treatment for about six days and changed again to iodide of potash, two-ounce doses three times a day for two weeks, without producing iodism. To my surprise, the animal made complete recovery after this treatment.

TETANUS—RECOVERY—ANTITOXIN TREATMENT.

By W. A. YOUNG, D. V. S., Utica, N. Y.

Case No. I.

September 1, 1901, was called to one of our large truck stables and found a large brown gelding, about 17 hands, 1500 lbs., 8 years old. Upon making an examination found animal to be suffering with tetanus, quite excited from the rough handling he had received. I say rough; it was, considering the malady with which he was afflicted. Membrana quite prominent on slightest noise or touch, tail slightly elevated, hocks turned out, nostrils dilated, and all the characteristic symptoms of the disease. Removed to hospital, placed in slings; 120 cc. tetanus antitoxin injected at 6.30 P. M.; jaws

fast becoming locked, so that medication by mouth was impossible, though would suck gruel, nibble on green food, as green corn, grass, etc. Stall dark and quiet; the animal left entirely alone, except to feed, water, and for observation.

Sept. 2d and 3d, remained about same (quiet), with very little uneasiness.

On the 4th became very uneasy—stamping, champing jaws, profuse salivation; 20 cc. antitoxin injected at 11 A. M. After this gradually calmed down to same condition as shown upon previous days, this continuing up to the morning of the 6th, when patient again became uneasy, this increasing throughout the day. At 2 P. M. 40 cc. antitoxin injected, after this gradually quieting down to about same condition as shown upon Sept 3d.

From this date on he slowly and steadily improved; was removed from slings on the 18th and discharged as cured Oct. 1st.

Case No. II.

Bay gelding, 9 years old, 1300 lbs.; noticed acting wrong while working and was driven to Dr. Hollingworth's office, where the doctor diagnosed the disease as tetanus and ordered animal sent to hospital. Entered on Sept. 6th, and 100 cc. tetanus antitoxin injected at 11 P. M. The delay in injecting caused by being out of the antitoxin and supply had not reached us, though sent for the day previous. Animal very uneasy, so that it was a very difficult task to inject drug. Jaws at this time set very firmly, hocks turned out, tail elevated, membrana prominent. Considerable amount of nourishing gruels and green chopped food taken. Slings were also used, as in Case No. I. On the 7th animal quiet most of the time. At no period of his sickness were the spasms as severe as prior to injecting antitoxin, only the 100 cc. being used in this case.

As for the cause of both cases, the mode of entrance of the bacillus is not known, as no abrasions were found, upon very close examination, and no history of any previous injury. The above two cases, as others have, of like kind, impressed me that if the antitoxin is injected early in the disease before the cells of the system have taken up the toxin of the germs that we can get good results from antitoxin in tetanus.

DR. W. H. DALRYMPLE, of the Louisiana State University, has been elected a member of the Executive Committee of the National Live Stock Association.

DEPARTMENT OF SURGERY.

BY L. A. AND E. MERILLAT,

Chicago Veterinary College, 2537-39 State Street, Chicago, Ill.

SURGERY OF THE EYE, EAR AND UPPER AIR PASSAGES.

(Continued.)

IRIDECTOMY.—The object of the operation is two-fold : 1. To make an artificial opening for the passage of light ; 2. To relieve and cure inflammatory conditions of the eyeball. In human surgery, more importance is paid to the former than in veterinary surgery ; but the latter is about of equal importance in either branch of surgery. The loss of sight in domestic animals is not so serious a sequel as in man ; the conditions required for favorable results from delicate ocular operations are not as encouraging in lower animals as in human beings ; and the value of veterinary patients does not always warrant the expense incurred by such operations, and the trouble required to properly and successfully nurse such cases ; therefore the value of such operations is much less in veterinary than human surgery.

The conditions that may be considered indications for iridectomy are :

1. Dislocation of lens.
2. Glaucoma.
3. Cataract.
4. Prolapse of iris.
5. Iritis.
6. Foreign bodies and tumors.
7. Preliminary operation.

1. *Dislocation of Lens.*—This condition may be caused by injuries, such as blows, bumps or concussions, and may be dislocated in various directions. In some dislocations it is found in the anterior chamber, while in other cases it does not go beyond the posterior chamber. When the dislocation is into the vitreous chamber the condition is serious, and its extraction is followed by loss of vitreous humor. When the sclera ruptures and allows the lens to pass under the conjunctiva, it is easily extracted. Dislocations are always very serious conditions even when the lens can be reduced ; the complications that follow and the sequelæ resulting from the condition, are generally very unsatisfactory.

In any of the above conditions, iridectomy is only a pre-

liminary operation, which is performed in order to get access to structures beyond the iris.

2. *Glaucoma*.—The name "glaucoma" is applied to any condition of the eye characterized by an increased intraocular pressure or induration and hardening of the eyeball. For our purpose we will consider two forms:—1. *Simple Glaucoma*, which includes all glaucomatous conditions that seem to exist without inflammatory symptoms; 2. *Secondary Glaucoma*, which includes glaucomatous conditions that are sequelæ of other ocular diseases. Iridectomy has been considered a curative measure for glaucoma since 1856, and is to-day receiving as much attention as ever.

3. *Cataract* is a diminished transparency of the lens or its capsule, and is more commonly observed in old animals. It may be influenced by heredity, heat, trauma, internal ophthalmitis, and disturbed nutrition. The operation in the treatment of cataract may be considered *preliminary iridectomy*.

4. *Prolapse of Iris*.—The iris sometimes protrudes through openings in the cornea. Such perforations result from disease, traumatic or surgical wounds of the cornea. When the portion that protrudes through the *corneal wound* cannot be properly replaced *iridectomy* is indicated.

5. *Iritis*.—The causes of iritis are constitutional, local and metastatic. Constitutional iritis is not so common in domestic animals as local or metastatic, and either of these may be acute and chronic, or plastic and serous. In chronic plastic or serous iritis the intraocular pressure may be increased to such an extent as to necessitate paracentesis and even removal of part of the iris; or the iris may adhere to surrounding structure and require it to be loosened and probably part of it resected.

6. *Tumors and foreign bodies in the iris*.—Tumors found in the iris are cysts, angioma granuloma, melanoma and sarcoma. These tumors when removed often require the resection of part of the body of the iris. Foreign bodies in the iris that require a removal of part of the iris is an indication for iridectomy.

7. *Preliminary operation*.—Iridectomy is a preliminary operation when it is performed to enable the operator to get access to structures beyond the iris.

Sequelæ.—The operation, like all other ocular operations, is sometimes followed by undesirable conditions; among the most common sequelæ are sympathetic ophthalmitis and intraocular hæmorrhage. Sympathetic and internal ophthalmitis can be obviated to a certain extent by aseptic precautions; but, intraoc-

ular hæmorrhage cannot be prevented as easily as infection. The decrease in intraocular pressure is usually the cause of such hæmorrhage; and, it is impossible to determine when the eye is predisposed to such hæmorrhage; therefore such an accident is unavoidable.

Operation.—The instruments required for iridectomy are: A triangular shaped lance; a curved iris-forceps; a pair of curved iris-scissors; a metal grooved spatula or director; and a blunt hook.

The patient should be properly secured, and a general anæsthetic administered. The incision through the cornea is made at the upper margin as near to the sclera as possible. Care must be taken not to injure the iris unnecessarily. By removing the lance the aqueous humor is allowed to escape from the anterior and posterior chambers. The iris is then drawn through the corneal wound with the hook or iris-forceps, and clipped as desired, with the curved iris-scissors. The iris must be drawn out by gentle traction in order not to rupture the arterial circle of the iris. The iris must be cut in such a manner that no part of the remaining portion will interfere with the healing process or cause adhesions. It can be pushed out of the corneal wound by the use of the spatula and sometimes it is necessary to put it into proper position in the chamber with the spatula and hook or probe.

After-care.—If the operation was performed with aseptic precautions, no irregularities will follow. The eye should be dressed with gauze, saturated in a mild antiseptic solution, and a pad of absorbent cotton placed over it. The patient should be placed in a dark stall, and the eye dressed every twenty-four hours for the first seven or eight days.

NOTE.—The word "*introtechnics*" on page 833, Jan. number of REVIEW, should be *intratechnics*.

SURGICAL ITEMS.

The Re-union of Nerves in Neurotomy.—The surgical division of a nerve trunk is frequently followed by the formation of a tumor at the proximal end, manifested in the shape of a painful cicatrix which produces a lameness even more intense than the original lameness. As the resection of such tumors will again cure the lameness, surgeons usually conclude that the severed nerve trunk had re-united. Such a conclusion is wrong, as *nerves do not re-unite*. If a nerve were experimentally divided under the strictest aseptic precautions and the cut ends

brought together in perfect apposition and healed by primary union the nerve stroma would *re-connect*, but the *communication* between the *centre* and *periphery* would not be immediately established. When the cut ends of a nerve are not widely separated the active proliferation of the structures comprising the nerve trunk may establish a re-connection, or, again, when the ends are even very widely separated, the active proliferation attending the formation of exuberant granulations will frequently result in the same *anatomical* union, but in no instance is there a *physiological* union of divided nerves. When a nerve has been divided its power of transmitting impressions between the seat of division and periphery is destroyed forever. The nerve supply of an un-nerved area is re-established by a *diverging growth of the axis-cylinders from the nerve stump toward the periphery*, and such innervation is never perfect nor complete even after years. However, the union of the stroma of a nerve may facilitate the re-establishment of nerve supply to an un-nerved area by forming a guiding channel through which the new axis-cylinders may grow more rapidly. The importance of preventing such so-called union of nerves in neurotomy is not denied, as the process is no more nor no less than the formation of the troublesome *nerve tumor*. Although it is the sensitiveness of the connecting tissue, and not the connection itself, that causes the lameness, prevention of the tumefaction is quite as important as if the nerve supply were fully re-established. This sequel of neurotomy is prevented (1) by resecting the nerve well beyond the proximal commissure of the wound, so that the stump will not lie within the wound and share in the reparative inflammation. The surgeon is too apt to hurriedly sever the nerve at the upper commissure in order to prevent the non-anæsthetized patient from struggling. Careful dissection and gentle traction at the upper commissure is an indispensable feature in the prevention of nerve tumors. At the distal commissure of the wound no special care is necessary. (2) The septic inflammation following an unclean operation is a potent factor in the causation of nerve tumors by encouraging the formation of an abundance of new tissue, nerve tissue included. Hence the neurotomy operation should be strictly an aseptic procedure. (3) The incision and dissection should be performed without mutilating the surrounding structures. The artery, vein and connecting areola should not be unnecessarily disturbed in order that the wound may heal with the least possible inflammation.—(L. A. M.)

A Hoof Pad to Prevent Nail Pricks.—It is well known that nail pricks are uncomfortably common in any large stable of city work horses, and an appliance that will prevent their occurrence should be accepted with open arms. A leather covering to be effectual must be made of heavy leather that will bear too heavily upon the sole of flat-footed horses, and besides will favor loosening of the shoe and are expensive. Sheet-iron plates are difficult to apply and are objectionable for reasons too well known to mention. The pad for this purpose must be cheap, it must be easily made and applied at the time of shoeing and must possess no objectionable feature, such as loosening of the shoe, formation of corns, lameness from sole pressure, thrush, etc. These requirements seem to have been met by the invention of Mr. Thos. Donolan, of Armour & Co.'s, Chicago, in whose stable of three hundred horses not a single nail wound was sustained during six months, while before their use from five to fifteen horses were continually out of service from the lameness of nail wounds. The pad consists of three layers of canvas strengthened across the heel by a band of sheet iron two inches wide. With a simple cutting machine the horseshoer can make one of the pads in a few moments and adjust them without delay.—(L. A. M.)

EXTRACTS FROM EXCHANGES.

GERMAN REVIEW.

By ADOLPH EICHHORN, D.V.S., Bureau of Animal Industry, Milwaukee, Wis.

CHLORAL HYDRATE ANÆSTHESIA IN THE HORSE [*Prof. Fröhner, Berlin*].—As general anæsthetics for the horse, the veterinarian has at command, principally, chloroform, morphine, and chloral hydrate. In regard to chloroform, Fröhner in a previous publication pointed to the facts, that chloroform for horses is not a very safe anæsthetic. Similar bad experiences were had by Venerholm, Lanzilotti and others. Although the administration of morphine has many advantages, it has also some disadvantages; before all, that as after affects in many horses it causes uneasiness and excitement, which often lasts for several hours after the operation. Furthermore many animals suffer for hours from choking and symptoms of vomiting as a result of the morphine injection, which eventually may have very serious effects (foreign-body pneumonia). Fröhner,

therefore, in the summer session of 1900, in an experimental way administered in 75 cases chloral hydrate before the operations. The form of application of the chloral hydrate was exclusively rectal, with the following formula :

℞ Chlorali hydrati, 150.0
Gummi arabici, 75.0
Aquæ destil., 3000.0
M. f. emulsio.

The amount of 150.0 gm. chloral hydrate is equivalent to one and a half doses ; it is advisable to prescribe a slight surplus, as very frequently some is wasted. The effect takes place in about half to one hour, and appears to be in young horses stronger than in old ; in common-bred horses the anæsthetic acts more powerfully and will come on sooner than in thoroughbred animals. The anæsthesia manifests itself by swaying, falling, sleepiness and closing of the eyes. Some horses fall into a deep lasting sleep, during which they snore aloud. As in some horses the muscular weakness is so great that they sink down, it is advisable to perform the infusion at the place of operation. In relation to the motoric weakness, the sensibility is not reduced to the same degree ; complete anæsthesia was only observed in a few cases. The duration of the anæsthesia varies in the same way as the intensity, and lasts on an average of from one to two hours. In three cases, there were also observed a few hours after the operation symptoms of choking and vomiting ; therefore, it is not advisable to feed the horses too soon after the operation. In one case three and a half hours after the operation, there was a prolapse of the rectum of the size of a man's head, which in spite of repeated repositions and applications of cocaine ointments, repeatedly made its appearance at intervals of half an hour, finally remaining in place the following day after the operation. Fröhner thinks it very probable that the chloral hydrate during five days standing of the emulsion, in a hot room (August heat), and periodically directly exposed to the sun's rays, under the influence of these two factors, through absorption of oxygen, partly changed into trichloroacetic acid. Fröhner also made some experiments with the combination of morphine and chloral hydrate, but which he cannot recommend, and concludes his observations as follows : Chloral hydrate, rectally, freshly prepared, strongly diluted in a slimy emulsion, is the best general anæsthetic for the horse, where a very deep anæsthesia is not required. For these cases it is to be decidedly preferred to the morphine and chloroform.

—(*Monatschr. f. pract. Thierheilk.*)

THE TREATMENT OF PERIODIC OPHTHALMIA WITH INTERNAL ADMINISTRATIONS OF IODIDE OF POTASSIUM [*Dor*].—D. made bacteriological examinations of an eye epizootic in Auxonne, and claims to have successfully obtained pure growths of the specific microbe, with which he was able to produce the disease in test horses by inoculations. On the ground of his culture experiments, he also states that the specific agent of this eye malady can not withstand alkalies, and experimented to suppress the disease by intravenous and rectal injections of alkalies. Among the applied agents, the iodide of potassium proved to give the best results in the treatment of the inoculated disease, while the control animals were very severely affected. D. administered daily 15 to 18 gm. of the iodide of potassium in a 1 per cent. solution, intravenously, or 25 to 30 gm. by os. In one case of periodic ophthalmia D. succeeded in bringing about a resorption of a severe hypopion in 48 hours with the administration of the iodide of potassium.—(*Bull. de Soc. Centr. de Med. Vet.*)

OPERATIVE REMOVAL OF A CYSTIC CALCULUS [*Dr. Vogt*].—The urine of a horse for several years was bloody, especially so after great exertions. The examination reveals beside an emaciated condition, great quantities of fibrin flocks in the urine, slimy sediments and blood clots, considerable albumen and calcium carbonates. The rectal examination reveals the presence of a calculus of the size of a lemon in the bladder. Operation through opening of the urethra, close under the rectum. The stone had to be crushed and removed in pieces. Bladder, urethra and wound were irrigated with a 1 per cent. tannoform solution, at body temperature, the external opening of the wound was closed by stitches. The weight of the stone was 90 gm. and consisted chiefly of carbonate of lime. About a month after the operation a membrane was removed through the wound, which, by its extension, entirely lined the internal surface of the bladder, and containing great quantities of crystals and yellow sand particles. Besides a large amount of sand, a calculus of the size of a pigeon's egg was washed out in the irrigation of the bladder with a solution of boracic acid. Complete recovery took place inside of four months.—(*Deutsch Thier. Wochen.*) [A similar and very skillful operation I had the pleasure of witnessing at the American Vet. Hospital, while acting there as house surgeon, and which was performed by Prof. Dr. W. J. Coates. The presence of a large calculus was established, and an operation for its removal was decided

upon. The operation was performed under chloroform anaesthesia. The procedure was the same as described in the operation above, with the exception that the stone could not be crushed with the lithotrite; the calculus being covered with a membrane which prevented the fixation of the instrument on the stone. After a number of trials, the instrument was laid aside, and with the aid of a trocar and hammer the stone was split into several pieces and removed successfully in the following way: The trocar was inserted through the wound and the urethra into the bladder, while the stone was fixed through the rectum towards the neck of the bladder by an assistant. With a few gentle blows the trocar split the stone into three pieces, which were then removed. After treatment consisted in irrigation of the bladder with mild antiseptic solution; complete recovery took place in about six weeks.]—(A. E.)

ENGLISH REVIEW.

By Prof. A. LIAUTARD, M.D., V.M.

A CEREBRAL ABSCESS [*T. Wolsey, M.R.C.V.S.*].—It is under the heading of "Another Brain Case" that the author relates the history of a young American horse which for five days exhibited a series of brain trouble manifestations with respiratory and cardial complications, and which at death exhibited the following lesions: Stomach and small intestines nearly empty; apex of the lung consolidated and putrid; pleurisy, with small amount of fibrinous lymph of visceral pleura covering the pericardium. This membrane was thickened and inflamed; numerous hæmorrhages under endocardium; meninges much congested; abscess about the size of a walnut in the left cerebral hemisphere, containing evil-smelling, thick, yellowish-white creamy pus; walls of abscess cavity black; no communication with ventricles of brain.—(*Vet. Record.*)

INTUSSUSCEPTION OF SMALL INTESTINES [*Ch. Sheather, F.R.C.V.S.*].—Should the question put by the author—"Did the struggling on being cast cause it?"—be answered affirmatively, this is then a sequel heretofore unobserved to add to those already on the list of accidents likely to occur when animals are cast. The subject was an aged horse, which, suffering from cartilaginous quittor, had to be thrown and chloroformed for operation. This was done after a fasting from food and water

for several hours previous to being cast, the animal struggling very much until well under the chloroform. Released from the hobbles after the operation, he was taken to a comfortable place, where he remained quiet for four hours, when he began to show pain, restlessness, scraping of the feet, and every indication of abdominal pain. Notwithstanding treatment, death occurred after three hours' suffering. At the post-mortem an intussusception of the small intestines was discovered, the invaginated portion of the organ measuring not less than 23 feet in length. The stomach was also found full of fluid, so that it may be suspected that the horse had been watered contrary to the author's directions. At the end of his report, Mr. S. says. "The struggling on being cast might have caused many more likely things than invagination of the ilium. Did it cause it? Would four hours elapse before any sign of pain occur? Was it a coincidence? Probably the true explanation lies around the stomach full of food.—(*Vet. Record.*)

OBSTRUCTION OF THE RECTUM—SUCCESSFUL REDUCTION OF A TWISTED COLON [*A. L. Farrant, M.R.C.V.S.*].—A mare exhibited symptoms of colic, for which the ordinary treatment was prescribed, without giving relief. The animal was in great pain, and, notwithstanding the administration of morphine, the case seemed to be hopeless. By rectal exploration it had been observed that the hand, pushed through the anus, could not go in beyond about nine inches or a foot, and presented then as if there was a *cul-de-sac* with a twisted opening, with room only to insert the middle finger from right to left. Warm enemas and glycerine injections seemed of no avail. By repeated attempts to force the hand through the small opening it at last yielded as though a cord had been suddenly broken, and the whole length of the arm was able to pass into the rectum, which was found filled with one solitary pellet of fæces. Warm rectal injections of water and glycerine were then administered, and as the animal was very restless more morphine was given. Another rectal examination gave the sensation of what was at first supposed to be the distended urinary bladder, but on closer examination it was concluded that it was the colon, as its muscular bands were distinctly felt. To reduce the torsion the hand was introduced towards the left side of the rectum, and pressed forwards and upwards towards the midst of the body, while pressure was applied under the abdomen. After two unsuccessful attempts, a third one was made, the next morning, and the result was at last satisfactory. After a few hours, with proper treatment, defecation took

place in a fairly natural condition, and gradually the mare recovered.—(*Vet. Record.*)

COMPLETE REMOVAL OF TWO SACRAL VERTEBRÆ IN A COW —RECOVERY [*W. M. Scott, F.R.C.V.S.*].—An eight-year-old milk cow was presented to the author for a small injury on the "rump-bone." The wound was situated on the median line, over the second and third sacral vertebræ. Covered by a thick scab, from under which pus oozed freely, it showed a fistulous tract some five or six inches long, and running perpendicular to the bone, which was felt on probing. A thick wall of granulation tissue surrounded the wound. The owner objecting to the destruction of the animal, Mr. S. decided to operate. The cow was cast and chloroformed. The soft tissues were freely excised and the extensive diseased bony material removed. The hæmorrhage was abundant. The resultant cavity was treated as antiseptically as possible, and the animal recovered with only a paralysis of the tail, which required amputation high up. According to the author: "(1) *Muscles*: Origin of the biceps femoris from the sacral spine, part of the semitendinosus, of the buccinator coccygis, and of the curvator coccygis. (2) *Bones*: Probably the second and third sacral vertebræ. (3) *Nerves*: Prolongation of the spinal cord, sacral nerves from inferior foramen, branches of the lumbo-sacral plexus, sympathetic gangliated cord. (4) *Blood-vessels*: Middle sacral, small collateral branches, cutaneous and deep. (5) *Ligaments*: Prolongation of the supra spinator ligament."—(*Vet. Record.*)

ANEURISM OF THE AORTA WITH CALCIFIED WALLS [*H. G. Simpson, M.R.C.V.S.*].—A cob, five years old, being affected with intermittent lameness for a long time, was finally destroyed and a post-mortem made to ascertain if his trouble was not due to thrombosis of the iliac arteries. At the autopsy an enlargement was found over the aorta just behind the diaphragm, which proved to be a large aneurism. The walls of the enlargement were hard, brittle and calcareous. The cavity was filled with a clot. Three atheromatous patches were found in the coats of the aorta within a few inches of the aneurism. This measured seven inches in circumference at its broadest part, and the longitudinal measurement, including the wall of the vessel, was nine inches. There were no traces of thrombosis in the iliacs. The animal had been lame for some two years, first on the off, then on the near hind leg, the lameness generally manifesting itself after short work and subsiding by a few days of

rest. In some instances, after going a quarter of a mile, he would suddenly reel, seeming to lose control of his legs, sweating profusely, and in considerable pain. All of these symptoms would pass away by rest and return as soon as exertion was demanded of him. In the beginning spavin had been suspected and a blister was applied.—(*Vet. Record.*) [There being no thrombosis, was the aneurism the cause of the trouble.? It is regrettable that no mention is made of the condition of the hocks at the post-mortem.—*A. L.*]

ACUTE SPLENITIS—CAUSE? [*H. J. R. P.*].—It is indeed an attack of acute splenitis which carried off a valuable deerhound dog, in the very pink of condition, and which, after a gallop in the morning, was suddenly taken ill in the afternoon, with hurried and painful breathing and abdominal distension, for which he received a dose of oil. He grew worse; the tympanites of the abdomen increased, eyes were sunken, corners of the mouth retracted, salivation, anxious expression, temperature 102.4; no motion of bowels by first dose of oil. The dog died in a few hours, and at the post-mortem all the organs were found normal except the spleen, which was black, enormously enlarged, weighing two and a half pounds; the omentum was congested, and the distended stomach contained a lot of fluid and partly digested food. The size of the spleen suggested splenic apoplexy, but no trace of the bacilli could be found under the microscope. What could have caused this? If it were not a sudden enlargement, how could the dog have been in such spirits and form in the morning?—(*Vet. Record.*)

RUSSIAN REVIEW.

By Prof A. LIAUTARD, M. D., V. M.

TUBERCULOSIS IN THE BUFFALO [*N. Kantzelmaher, of Tiflis*].—To this day tuberculosis among buffaloes has been studied but little. According to Prettner, these animals are refractory to it. This author has made only two experiments: to a young buffalo cow he injected in the vein of the ear 5 cc. of a virulent culture and 20 cc. in the peritoneal cavity. A month later the animal was killed and no tuberculous lesions found. To control this experiment, he inoculated a young calf with 5 cc. in the vein of the ear and 10 cc. in the peritoneal cavity, and after three weeks the animal died with marked tuberculosis. In another experiment Prettner injected a virulent culture to an

aged buffalo and as a means of control to a calf. After one month the old animal when killed presented no evidence of tuberculosis, while the calf was extensively tuberculous. Criticising these experiments, Kantzelmaher states that the conclusion of Prettnier cannot be admitted as decisive, as observations of slaughter-houses prove the contrary. From the statistics of the author during four years, 20,715 buffaloes were killed at the abattoirs of Tiflis, and tuberculosis was found in 5. The post-mortems left no doubt about it. Three of these were not studied microscopically, the others were. Those five cases of tuberculosis, says the author, prove that the opinion of Prettnier is not sufficiently demonstrated, and that one can affirm that tuberculosis is not very rare in those animals. During his four years at the abattoirs the author has observed only one case of actinomycosis in buffaloes, and on that account he believes the disease is rare with them. In relation to tuberculosis of buffaloes, Kantzelmaher has only observed one true case of phthisis pulmonalis. This he considers very rare in buffaloes.—(*Archiv. Vet. Russ. Jo. de Zoötech.*)

TREATMENT OF RHEUMATISM IN HORSES BY SUBCUTANEOUS INJECTIONS OF SALICYLATE OF METHYL [*D. Kissielow*].—In human medicine good results have been obtained by friction of salicylate of methyl or with salicylated ointments; but a close-fitting bandage is always required on the diseased part. As such cannot be well applied on animals, the author thought of subcutaneous injections, and resorted to them in six cases. *Case I.*—Rheumatism of the scapular region, which was rebellious to other treatment. Subcutaneous injections of 10 cc. of salicylate made every five days were followed by recovery. *Cases II and III.*—Two horses suffering with severe rheumatism; both had been treated during the winter and spring without results. At the end of June injections of 10 grammes of salicylate were made in the femoral and brachial regions. After ten or twelve days there was marked improvement, followed after eighteen or twenty days by complete recovery. *Case IV.*—A mare was lame with rheumatism of the hip; she received 10 grammes of salicylate of methyl, renewed seven days later. Five days afterwards she was cured. *Case V.*—A horse was lame for some time in the left foreleg from chronic rheumatism; 10 grammes of salicylate were injected in the scapular region, followed by another seven days later. In five days there was complete recovery. *Case VI.*—A colt showed symptoms of muscular rheumatism of the four extremities; during six weeks injections

were made every five days, and the animal recovered. According to the observations of the author, this treatment is to be preferred to the use of arecoline, pilocarpine, and veratrine on account of the rapidity of its action.—(*Archiv. Vet. Russ. Jo. de Zoötech.*)

CORRESPONDENCE.

THE BANQUETS OF THE A. V. M. A.

RALEIGH, N. C., Jan. 11, 1902.

Editors American Veterinary Review:

DEAR SIRs:—While Dr. W. L. Williams seldom attends the banquets of the American Veterinary Medical Association, still, in the January REVIEW, page 848, he most unmercifully excoriates those of us who have been "loyal" enough to attend and "unfortunate" enough to be placed in the "embarrassing position" of which he speaks. Truly, Dr. Williams has made the position of the speakers at future banquets doubly embarrassing.

Seriously, it is the opinion of the writer that what Dr. Williams has said about the speeches at the banquets of our association is fully justified. In fact, his criticism might have been made much more severe, if that were possible, and still have been richly deserved; but the important point of his letter is the question of future improvement. His suggestion that the banquet speakers be given early notice is by no means new. The writer has, on more than one occasion, suggested this to the Secretary and others and knows that they approve of it, still the "old peculiar methods" have been pursued. In some cases, even the President of the association has been kept in complete ignorance of the toast list and speakers until after it had gone to the printer, notwithstanding his repeated request that he be allowed to see it as early as possible. In short, the manner in which the toast lists have been prepared has, on more than one occasion, been more than merely "suggestive of a deliberate attempt to put an enemy in an embarrassing position."

While I do not agree with Dr. Williams that *appropriate* banquet speeches are usually such as a scientific association should care to preserve, still, with the memory of past efforts fresh in my mind I am indeed amazed at the mildness of the characterization, "dry," from his usually vitriolic pen.

Both the "flavor and substance" of these banquet speeches can be much improved, even to the extent that Dr. Williams

might be willing to listen to them, if the local committee having the banquet in charge will confer with the President and Secretary and announce the toast list not later than the first day of the meeting. I, therefore, endorse all that Dr. Williams has said about the quality of these banquet speeches in the past and the wisdom of in the future giving at least a few hours' notice of the subjects to be "toasted" and the unfortunates to be "roasted."

While we are discussing the banquet question there is another point worthy of consideration. Since the attendance of the ladies has become a fixed feature of our meetings I am of the opinion that they should be welcomed to our banquets. I know personally of many members who wish for this innovation. Active and regular participation in the business of the meeting means almost complete exclusion from social intercourse with the lady visitors. This is regretted by many and it seems to me might be largely obviated by making the banquet the crowning social function of the meeting, where we might become acquainted with and enjoy the society of the wives and daughters of our friends. If the hour preceding the banquet, which is usually sufficiently late to admit of it, were devoted to informal social intercourse and improving acquaintances the enjoyment of the occasion would be much enhanced.

Now, Mr. Editor, I have one more suggestion which I hope you will give the stamp of your approval. I insist that at the next meeting our friend Williams be compelled to attend the banquet and speak for not less than ten minutes on some subject to be selected on the spot by yourself. I promise to provide the stenographer to "take it down" that we may "preserve" it.

TAIT BUTLER.

DIFFICULTIES OF ARMY VETERINARIAN IN THE PHILIPPINES.

BATANGAS, PROV. OF BATANGAS, P. I., Nov. 16, 1901.

Editors American Veterinary Review:

DEAR SIR:—I have taken the liberty to make a further report on "Surra,"* which is so prevalent here at the present time, having under my observation at least two hundred animals suffering from it. One great drawback is that it is almost impossible to get necessary drugs for the purpose of combating diseases. While all officers do their utmost to assist the veterinarian, under the present system many hundreds of animals

* Published elsewhere in this number of the REVIEW.

die for the simple reason that we are unable to treat them because of not being able to have corrals, instruments, drugs, etc.; that is one reason that an efficient veterinary department with a young experienced business man at its head would be of benefit to the public service. When one considers that each animal on these islands costs the government six hundred or more dollars to land here, the actual loss from death of animals is appalling, and this loss could in a great measure be prevented by allowing the veterinarian privileges equal to the medical man in the United States army.

Respectfully yours, COLEMAN NOCKOLDS.

AS TO TUBERCULAR LESIONS OF THE INTESTINES.

INDIANAPOLIS, IND., Jan. 16, 1902.

Editors American Veterinary Review :

DEAR SIRs:—Prof. Koch has said, I believe, that if the tubercle bacillus enters the body with the food and infects it we should find the primary lesions in the intestines.

I think it is admitted by all that tuberculosis in hogs is a "feeding tuberculosis," generally, why, then should we not find the primary lesions in the intestines in hogs, and do we?

From my experience with the disease in hogs I would say that I usually find the lesions in the portal gland, liver, spleen, mesenteric glands, under the pleura and in the submaxillary lymphatic glands, sometimes in the mediastinal glands and lungs, *but, very seldom have I examined the intestines.*

It was my good fortune one day to condemn twenty-five hogs for tuberculosis out of three hundred and fourteen killed. While waiting for the men to run the carcasses to the detention room I thought I would examine the viscera again and with my knife opened the small intestines throughout, the cæcum and about one foot of the large intestine, in five cases, washed them out well and examined thoroughly, but found no tubercular lesions in the mucous, serous or muscular coats. I wish now that I had examined all of those cases.

What I wish to suggest is that all inspectors throughout the country examine the intestines in all cases of tuberculosis in hogs and report their results through the pages of the REVIEW. It will only take a few minutes and even if they are killing six hundred or more an hour it can be done when there are two inspectors on the "gutter's bench."

CHAS. H. CANFIELD, D. V. M.,
U. S. Inspector, B. A. I.

QUACKERY IN NEW YORK STATE.

SARATOGA SPRINGS, N. Y., Jan. 13, 1902.

Editors American Veterinary Review:

DEAR SIRs:—In answer to your article on "A Serious Menace to Veterinary Progress," I would say as a suggestion that in my opinion the best way to eradicate the nuisance of this charlatanism and quackery would be for each and every graduated and qualified veterinary surgeon to attend personally to keeping the district in which he practices clean; by instituting a personal prosecution, backed up by his neighboring brethren, and the State Veterinary Medical Association, as it could be done with much less expense, as the local veterinarian would know of all the law violators. Each man should have the support of the entire veterinary profession of the State. No one man can do it all alone.

T. S. CHILDS.

AS TO ILLEGAL PRACTITIONERS IN NEW YORK.

KANSAS CITY, KANSAS, Jan. 20, 1902.

Editors American Veterinary Review:

DEAR SIRs:—I heartily agree with your sentiments in regard to illegal practice in New York State, and if some step is not taken by the State Society, our profession is bound to retrograde. I know of any number of such men practicing in the vicinity where I was located [Dunkirk] until December, 1901, and they all get a certain amount of work. It certainly makes one feel belittled to be classed with such men by the uneducated public. In Watkins, N. Y., right near the State College, is a graduate of a two-year college practicing without legal right, as he was graduated since the State law regulating practice was enacted.

Respectfully yours,

C. H. JEWELL.

VETERINARY PRACTICE IN NEW YORK.

ASSEMBLY BILL NO. 254—AN ACT TO AMEND THE PUBLIC HEALTH LAW RELATING TO PENALTIES FOR PRACTICING VETERINARY MEDICINE AND SURGERY WITHOUT A LICENSE.

At present any incorporated veterinary medical society of the State or any county veterinary medical society can bring an action in the name of the county in which a violation of law relating to the practice of veterinary medicine has occurred, for the recovery of the penalties imposed for such violation.

The bill cancels this authority so that the District Attorney upon information furnished by such a society shall cause an action to be brought for the recovery of such penalties; one half of which, after expenses are paid, shall be delivered to the society giving the information, and the other half shall be paid into the county treasury.—(*Brooklyn Eagle*, Jan. 24.)

OBITUARY.

WILLIAM H. PROPHETT, D. V. S.

At Suffield, Conn., Jan. 17, Dr. Prophett succumbed to heart failure following a long period of sickness, which seemed to be a complication of minor disturbances. The deceased was a graduate of the American Veterinary College, class of 1885, and had practiced at Bridgeport, Conn., for the greater part of his professional career, having disposed of his business four or five years ago on account of failing health and removed to Suffield. His son, James H. Prophett, is also a veterinarian, being a graduate of the same college as his father, and succeeds to his business. The funeral occurred on the 20th ult., from the family residence.

ROBERT JACKSON SAUNDERS.

ON Jan. 22, at Highland Station, West Roxbury, Mass., this well-known veterinary surgeon died from heart lesions as a complication of rheumatism, aged 66 years. He was one of the original members of the U. S. V. M. A., and, though a self-made man, was a thoroughly conscientious and studious practitioner, who gained the respect and good will of all who knew him. He was a brother of the late William Saunders, the father of Frederick, and an uncle of the late John S. Saunders. He gave up active practice about two years ago on account of rheumatism, but was only confined to the house for three days. He was interred at Salem on the 25th.

SOCIETY MEETINGS.

CHICAGO VETERINARY ASSOCIATION.

Meeting called to order at 8.41, December 9. Members present 23. Minutes of previous meeting read and approved. Secretary reported the receipt of bills for printing, etc., to the amount of \$14.50. After considerable discussion among the

members, some of whom claimed that the bills were excessive, while others thought that any committee should get authorization before incurring expenses, it was moved and carried that the bills be accepted and paid from the treasury of the society. Treasurer Walker reported \$83.15 in the treasury.

Dr. L. A. Merillat, of the Committee on New Literature, read an interesting paper on happenings and items of interest to the society, including the following subjects: Dr. Robert Koch's statement regarding the immunity of man to bovine tuberculosis, the tetanus outbreak in St. Louis, spinal cocainization, increased popularity of tuberculin tests on human patients, concluding his paper with a report of the proceedings of the last annual meeting of the American Veterinary Medical Association at Atlantic City, giving resolutions adopted by that body. The report is as follows:

"*Koch's Statements.*—The most important event of interest to the veterinary profession since our last session is the statement by Professor Robert Koch as to the immunity of the human body to bovine tuberculosis. At the Tuberculosis Congress held in London in July, 1901, this eminent German expert reported the results of certain experiments to substantiate the above proposition, and for the third time has astounded the civilized world with his work on tuberculosis: The first time when he discovered the etiology of tuberculosis, the second when tuberculin was brought prominently before the world, and the third, by making a statement contrary to the theory which had been universally accepted by all scientific medical men. While the statement is not entirely new to comparative pathologists, coming from one so high in the profession the laity were immediately brought face to face with a statement that seemed to surprise them. Koch has proven that cattle are not susceptible to human tuberculosis by artificial inoculation, and that the same cattle under similar conditions readily succumb to artificial inoculations of bovine tuberculosis, and that swine fed with human sputum alive with tubercular bacilli do not contract the disease, but readily yield to the same experiments with animal bacilli. He theorized therefrom that the tubercular bacilli which these animals carry will not produce tuberculosis in man; and the fact that Koch is supported by hosts of the most eminent pathologists of the world cannot be denied. From all the literature that this committee is able to secure at the present date, however, it is evident that the question is still an open one that will require years of experimentation before it is definitely set-

tled. Koch refers to the rarity of intestinal tuberculosis in children as a strong argument in favor of his theory. He claims in this connection that if man were susceptible to bovine tuberculosis through the ingestion of meat and milk the intestines should be primarily the seat of the tubercular lesions. Although this committee may seem ridiculous in the eyes of its hearers to repudiate the theories of such eminent men, we are forced to believe that tuberculosis may be disseminated through the body through the intestinal tract without causing tubercular lesions in the intestines themselves. If the alimentary canal were eminently susceptible to tuberculosis, how would a man suffering from pulmonary tuberculosis escape intestinal tuberculosis when it is known that he is swallowing millions of tubercular bacilli continually? The time is especially opportune for this society to discuss this salient point.

"Tetanus Outbreak in St. Louis.—A new danger in the use of diphtheria antitoxin was exemplified by the death of a number of children after they had been injected with medicinal doses of this biological product. It might be well here to refresh our minds with the fact that diphtheria antitoxin is manufactured by charging the blood of horses with large quantities of diphtheria toxin and diphtheria bacilli. The blood serum of such animals after being duly filtered and tested as to strength, constitutes diphtheria antitoxin. In the St Louis case the serum was drawn from a horse's jugular on August 24th. The horse died from tetanus the first week in October, six weeks after, showing that the toxin of tetanus may be a long time accumulating before it is manifested clinically. This committee does not believe that this unfortunate circumstance, awful as it is, will materially affect the use of diphtheria antitoxin, but that it will add to the responsibility of the persons engaged in its manufacture.

"Increased Popularity of Tuberculin Tests on Human Patients.—The value of tuberculin tests in the diagnosis of tuberculosis in its bacillary stage in the human patient is becoming more and more recognized by the practitioners in human medicine. For a number of years it fell into disuse because of the supposed danger attending its use. Recently such eminent authorities as Evans, Castleberry and others of note, placed much stress upon its great value in ferreting out the most remote cases, thereby making it possible to begin rational therapeutics before the disease had developed into an incurable affliction. The same authors, however, referred to reactions in nontuber-

culous patients, who are suffering from syphilis, sarcoma, or carcinoma. The value of this test in the bovine genus is too well known to reiterate here.

"Spinal Cocainization.—This committee during the last session referred to the probable practicability of spinal cocainization in domestic animal surgery. At that time this method of producing anæsthesia was becoming quite popular in human hospitals all over the world. In view of the fact that the first experiments were performed upon animals we were led to the belief that that procedure was a practicable one for the veterinarian. We find, however, that instead of gaining popularity in human surgery it is fast losing prestige on account of the danger of infecting the spinal cord. The difficulty of overcoming this very obstacle being greater in veterinary surgery than in human surgery, leads us to conclude that spinal cocainization is not a practical operation for the veterinarian.

"Annual Meeting of the American Veterinary Medical Association.—The annual meeting of the American Veterinary Medical Association at Atlantic City, on September 3, 4, 5 and 6, 1901, was one of the most important meetings in its history. Some of the resolutions adopted by that body were as follows: [These resolutions were published in the October REVIEW.]

The regular programme was prolific in papers and discussions of importance to every veterinarian, and the surgical clinic is said to have surpassed that of previous years, both as regards the number of operations, and for the arrangements for spectators and operators. This committee urges the members of the Chicago Veterinary Society to take a more active interest in the affairs of the American Veterinary Medical Association, and thus contribute to its welfare."—(*To be continued next month.*)

Dr. Hawley, President, announced that the Government Bureau of Animal Industry had just issued a bulletin written by Dr. D. E. Salmon, Chief of that Bureau, on the relation of bovine tuberculosis to man. This bulletin, he stated, is free to any one who will write for it, and it contains exhaustive statistics collected by Dr. Salmon, of accidental inoculations, proving in his opinion that bovine tuberculosis *is* communicable to man.

Under the head of reports from committees, Dr. Quitman, chairman of the committee on subscriptions, made the following report:

"Gentlemen:—The committee appointed to solicit subscriptions for the purpose of entertaining the American Veterinary Medical Association at its next session, provided it is secured for

Chicago, has, I believe, met with a very liberal support. We have pledged to be paid \$577.50. This is without Dr. Hughes' report, he being sick and having turned in no report as yet. So far I have received no response from the commercial houses of this city, but have every reason to suppose they will contribute very liberally to the fund. Dr. Merillat informs me that Houseman & Dunn stated that they would not lag behind in the matter of subscriptions. The West Disinfecting Co., manufacturers of Chloro-naptholeum, say they will contribute any amount called for up to \$300, and the Pasteur Vaccine Co. will do as well. Sharp & Smith and Truax, Greene & Co. will help us. I have no doubt we will be able to collect an ample amount, and for my part I can see no reason why we should not go ahead and perfect arrangements for inviting them to this city. The Illinois State Veterinary Association passed resolutions suggesting that their officers invite the American Veterinary Medical Association, their idea being not to send a general invitation, but each association to send a separate invitation stating that they are acting in conjunction with the other society."

Dr. Quitman's statements brought forth a long discussion as to the propriety or advisability of having the invitation a joint one. Some members thought as this society did all the work, collected all the money, and took it on themselves to do the entertaining, they should send the invitation and receive the thanks for it. Others held that as this society was to entertain with money collected from the State Association and from the business and professional men of Chicago and Illinois, outside the Chicago Veterinary Society, it should be a joint affair, and that there should be no feeling of animosity created between the two societies. Dr. Robertson seemed to turn the tide of opinion, however, by stating that the subscription lists had been circulated at the last meeting of the State Society with the result that \$185.50 was subscribed by the members present. Nearly every member subscribed something.

Dr. Quitman, the only member of the Committee on Legislation present, had no report to make.

A sharp discussion was started when the Committee on Entertainments was called on for a report. Dr. Clancy, as a member of the said committee, asked to be informed as to the duties of that committee. The by-laws were read by Dr. Hawley.

Several applications for membership were read, but as they had not been acted on by the Board of Censors, and as none of the censors were present, it was moved and carried that the

rules of the society be suspended for the evening and the members voted on by the society as a whole. The licentiate record for the State of Illinois was referred to to ascertain whether or not the applicants were duly registered. The question was brought up as to whether or not it was essential that a veterinarian be registered in order to be eligible to membership. It was asserted and admitted that there was nothing in the constitution of the society to that effect, but as one member stated that according to the present laws of the State of Illinois, any person practicing veterinary medicine in the State of Illinois without being first duly licensed and registered, is a criminal, it was decided that in order to prevent criminals from being admitted to membership in the society they should first be duly registered as licensed veterinarians. It then became necessary to refer to the records of the Secretary to ascertain whether the vouchers for the applicants were in good standing in the society. "In good standing" was defined as having their dues paid to and including December 31st, 1901. The applicants passed on were as follows: Dr. Albert Rudberg, vouchers Ryan and Campbell, admitted; Dr. Jeffrie, vouchers Walker and Baker, admitted; Dr. Smelley, vouchers Quitman and E. Merillat, admitted; Dr. Frederick W. Buecher, vouchers Merillat and Walker, admitted; Dr. Miller (one of his vouchers not in good standing) held over till next meeting.

Dr. Allen then read the following paper on the subject of

"RESULTS OF NEUROTOMY AND WHY."

"This paper was written principally for the purpose of bringing out a discussion on the results of this well-known operation and the reasons why these results occur. The operation, I think, we all perform in substantially the same manner, some standing, aided by a local anæsthetic, others by casting or on a table. For my own part, I prefer the latter. The three most common neurectomies are the median, the high and the low. I will take the operations in that order.

"*Median.*—Median neurectomy I have performed but seldom, as I consider the cases calling for it are very few. The bad results of this operation in my own practice are none, and I have only observed one, that of a quittor I was called to operate on and which refused to heal at all, although the wound was to all appearances perfectly healthy. I was unaware at the time I operated that median neurectomy had been performed a year before for tendon lameness. I was obliged to destroy the

animal. The high operation is the one I always perform for ringbone and sidebone and generally for navicular disease. I have good results with this operation in these diseases. Low ringbone, especially if the exostosis be towards the front, I consider should not be operated on, as the greatest number of failures from neurectomy in my practice have been from these cases, caused, I believe, by a pressure on the coronary band, between the exostosis and the hoof. The low operation would be the one *par excellence* if it was always successful, but unfortunately it is not, as in many cases the lameness remains and so brings discredit on the operation, the owner always expecting when a horse is unnerved that he must immediately go sound, and then the high operation had to be performed finally. I believe, if the surgeon picks his cases, the unfortunate results so talked about in the high operation will be decreased materially. As to the length of time an animal will last after neurectomy, this is a question we are continually being asked, and we should know how to answer it. The longest time I ever kept track of a case was seven years, and this was a pair of light livery horses which I continually saw and drove for that time. When I last saw them they were still working. The shortest time was five weeks, and this quite recently, in a case of navicular disease, the high operation followed by a rupture of the flexor tendon. Bad results which I have noticed are fracture of navicular bone, rupture of flexor tendons, degeneration of tendons and surrounding tissue, sloughing of hoof either by diseased process or following an injury, neuromas and regeneration of nerve tissues. Fracture of navicular bone I have seen in two cases, both following the low operation, neither in my own practice. Rupture of flexor tendons, two cases, both following high operation, one in my own practice and one in a friend's. Degenerations of tendons and surrounding tissues, one case, following high operation. Sloughing of hoof following high operation, eight cases, five in my own practice. Sloughing of hoof from injuries, about a dozen all told, in my own practice and others. Neuromas.—These are of comparatively common occurrence, and come, I think, from the use of the animal too soon, sometimes causing great lameness. Regeneration of nerve tissues I have seen in two cases, one in a year and one in about eighteen months.

"I have a few statistics to offer on the results of these operations, as when I first started in practice I had the only table in the neighborhood and three practitioners used to bring their

operations to my hospital, and as there seemed at that time a prejudice among some practitioners at the operation, we kept statistics of all our cases for a period of five years. Out of 480 cases divided into 297 high and 183 low, the fatal cases being 3 high and 1 low. Two of the high operations were for low ringbone, and sloughing of the hoof took place. One for navicular followed with breaking down of the tendons and a low operation for the same thing with the same result. Since that time I have kept no regular statistics."

The lengthy discussion on the subject of neurectomy which followed Dr. Allen's paper, and which was taken part in by Drs. Baker, Robertson, McKillip, Hawley, L. A. Merillat, Quitman, Allen and others, was exceedingly interesting. Each member expressed his views with reference to the high, low and median operations and the special merits of each, showing his reasons for preference and illustrating with examples in his own practice.

Under the head of "new business" it was moved and carried that the Chicago Veterinary Society extend a formal invitation to the American Veterinary Medical Association to hold its next annual meeting in this city. It was suggested by Dr. Baker that the invitation be sent to Dr. Stewart, Secretary of the National body at Kansas City, but that a duplicate be sent to the Chairman of the Executive Committee at the same time. It was suggested by Dr. Quitman that the invitation should have embodied in it the promise that they would be given a royal reception and an all-around good time, should they decide to come here.

The meeting adjourned at 10.30, to meet at McKillip College Hall, 1639 Wabash Ave., at 8 P. M., on the second Monday in January, 1902.

E. MERILLAT, *Sec'y.*

VETERINARY MEDICAL ASSOCIATION OF NEW JERSEY.

The eighteenth annual meeting was held at the Trenton House, Trenton, January 9, 1902, and was called to order at 10 A. M. by the President, Dr. Wm. Herbert Lowe, of Paterson.

The following members were in attendance: Drs. A. Brown, of Windsor; T. Earle Budd, of Orange; George E. Fetter, of Hopewell; James T. Glennon, of Newark; G. P. Harker, of Trenton; E. A. Hogan, of Newark; J. B. Hopper, of Ridgewood; L. P. Hurley, of Hopewell; E. L. Loblein, of New

Brunswick; S. Lockwood, of Woodbridge; Wm. Herbert Lowe, of Paterson; J. Payne Lowe, of Passaic; J. V. Laddey, of Arlington; James McDonough, of Montclair; James H. Mecray, of Maple Shade; George W. Pope, of Athenia; Werner Runge, of Newark; T. E. Smith, of Jersey City; A. T. Sellers, of Camden; S. S. Treadwell, of Englewood, and L. E. Tuttle, of Bernardsville. Visitors and delegates present: Dr. Robert W. Ellis, of New York City, President of the Veterinary Medical Association of New York County; Drs. Leonard Pearson and W. Horace Hoskins, of the Pennsylvania Association; J. M. W. Kitchen, M. D., of East Orange, and Dr. T. B. Rogers, of Woodbury.

President Lowe gave his annual address, which was pithy, with good suggestions to committee men and members in general.

Applications for membership were received from Drs. Wm. P. Fink, of Atlantic City; Jacob Bühler, of West Hoboken, and Edward Rowe, Jr., Health Officer for the city of Summit. Applicants were duly vouched for and approved by the Board of Censors and were unanimously elected to membership.

Dr. Werner Runge, chairman, presented the report of the Public Health Committee, which is here given in part:

"Dr. John V. Laddey has prepared a paper entitled 'The X-Ray as an Aid in the Diagnosis of Tuberculosis in Cattle.' Dr. W. Runge will submit a paper entitled 'Results of Experiments to Transmit Tuberculosis of Man to the Bovine Race.' The work of the Public Health Committee is of a broad character and can only be covered in part. The Committee recommends the following resolutions:

"*Resolved*, That the Members of Congress and State Legislatures be requested to provide suitable laws, establishing a commission to be composed of the best men available, empowering said commission to make use of condemned criminals as subjects for experimenting in the transmission of bovine tuberculosis to mankind.

"*Resolved*, That no cattle should be allowed to drink from any polluted pond, brook or river. All public water troughs should be so constructed as to allow constant circulation of the water contained therein; that the overflow of said troughs should be so constructed as to allow all water to flow from the sides of same, thereby carrying off the surface water of said troughs continually.

Resolved, That we, as members of the Association, do hereby declare ourselves as heartily in favor of carrying out the law making it compulsory on the part of all veterinarians to report glanders, whenever it comes under their observation. And we further suggest that the law be carried out stringently and that the party concealing any case of glanders, coming under his observation, be summarily dealt with.

"*Resolved*, That it is the sense of this Association that every city.

town or township board of health should have at least one veterinarian on their staff, whose duty it shall be to have charge of contagious diseases of animals and the inspection of meat and milk."

Signed { W. RUNGE,
J. V. LADDEY,
G. F. HARKER.

In the discussion following the reading of the report special interest centred upon the recommendation made regarding experimental work upon criminals.

Dr. Pearson spoke of the personal responsibility of physicians who experiment upon human beings and, asked if a physician who by injecting bovine tubercle bacilli into a human body and thus causing disease and death be adjudged guilty, what can be said of editors of agricultural papers who have been recommending owners to keep tuberculous cows and use or sell the products from such animals. He believed that public opinion was against experimenting on human beings, that it would prejudice the public against medical men and shake public confidence in them and would be morally wrong. Experiments should be limited to animals.

Dr. Laddey, speaking for the recommendation of the committee, argued that in cases of experiment, as suggested by the committee, the law would place the responsibility upon the State and a physician would be acting for the State and hence not personally responsible for results of any experiment.

Dr. Treadwell argued that such a law could not prevail in this country, where all men are born free and equal.

Dr. Rogers stated that there was danger of a misconception of the fundamental principles of law; that we should remember the objects for which criminals were punished, among these being the protection of society and the reformation of the criminal.

Dr. Kitchen argued that the air which we breathe is laden with germs, and that they are not to be so greatly feared as some might believe; that autopsies reveal the fact that tuberculosis exists or has existed at some period of life in a large percentage of the human family and that it might not be such a serious matter for a person in good health and with great resistive power to subject himself to experiments, and that the State might better pay volunteers than experiment with criminals.

Dr. Hoskins gave warning that such a measure as had been suggested would meet with much adverse criticism in this country, where many persons were even opposed to experimental work upon animals; that any such a radical movement in the profession would be freighted with great danger.

At 1 P. M. the discussion was closed and adjournment taken for dinner.

Upon reconvening the report of the Animal Industry Committee was called for, and was given by the chairman, Dr. J. Payne Lowe, and was in substance as follows:

"Recommended that competent veterinarians be officially connected with all agricultural and live stock fairs, horse and dog shows, and that an animal census of the State be taken.

"Suggested that the subject of transportation of animals be looked into; the cars used for transporting animals, their construction and equipment, light and ventilation, cleanliness, disinfection, manner of feeding, watering and caring for stock are some of the details that the Association should investigate. There are a large number of horses and cows shipped into this State, cows advanced in pregnancy and lost either at time of parturition or afterwards, due to the effect of a retained placenta, metritis, etc., where the cause can be traced directly to rough treatment received and exposure during transportation. There should be a decrease in sickness and death among 'green' horses as a result of improved conditions of transportation.

"Your committee would recommend that all stallions and bulls be periodically examined as to soundness and health by a competent veterinarian appointed by the proper State or county authorities and that before said stallions and bulls be allowed to stand for breeding purposes the owners of such animals be required to produce a certificate of such veterinary examination. There are a number of diseases (such, for example, as osteoporosis in horses) that from an economic and agricultural standpoint concern the people of the State and which the veterinary profession must deal with, and your committee is of the opinion that the State (State Agricultural College and Laboratory) should make original investigations as to the etiology and pathology of this class of diseases.

"We would further recommend that this Association urge upon the proper authorities the necessity of asphalt and similar pavements being sprinkled with sand during the slippery season, as many animals are severely injured by falls, etc.

"This committee would like at a later date to take up the subject of foods and feeding with relation to the application of scientific principles in feeding animals to produce the best and most economic results."

"Signed for the committee, J. PAYNE LOWE, *Chairman.*"

Dr. Budd, chairman of the Committee on Legislation, reported for that committee and recommended that the Association endorse a bill which had been drafted by the committee, said bill providing for the creation of a State Board of Veterinary Medical Examiners to regulate the practice of veterinary medicine, surgery and dentistry in the State of New Jersey.

The bill was read and freely discussed by members and it was finally voted that the committee be authorized to draw upon the treasury for needed funds and assume full charge of introducing the bill in the Legislature.

Dr. Sellers, chairman of the Committee of Arrangements for the Atlantic City meeting, reported for the committee. The report was accepted and the committee discharged with thanks.

Dr. J. V. Laddey, delegate to the State Sanitary Association, reported, and his report was received and filed.

Dr. Wm. Herbert Lowe reported as a delegate to the meeting of the New York State Society.

It was moved and carried that a vote of thanks be extended to the veterinarians of Pennsylvania and New York for the assistance rendered this Association in entertaining the National Association at the Atlantic City meeting.

Drs. Treadwell, Sellers and Budd, appointed a committee on resolutions, presented the following, which were unanimously adopted by a rising vote :

"WHEREAS, God in his wise providence has taken away our brother and fellow laborer, Rush S. Huidekoper, who has for many years been a faithful worker in our profession, be it

"*Resolved*, That we hereby express our appreciation of his high personal character, his wise counsel, his long continued interest in the veterinary profession, and his ever willing and substantial help ; with deepest sympathy for his bereaved family, we commend them to God, the only comfort in such an hour of trial ; Be it further

"*Resolved*, That a copy of these resolutions be sent by the Secretary to the widow and family of our deceased brother."

J. M. W. Kitchin, M. D., of East Orange, who is interested in the dairy industry, read a paper entitled "Some of the Unsolved Problems of Milk Fever." The paper was well received and quite generally discussed. The conclusion reached was that while the disease was probably caused by ptomaine poison originating in the udder, no one had as yet succeeded in demonstrating the fact positively and that laboratory experiments should be conducted by State and Government with a view of determining the exact nature of the disease, the expense of such experimenting being beyond the reach of the average owner of live stock.

A paper entitled "The X-ray as an Aid in the Diagnosis of Tuberculosis" was presented by Dr. J. V. Laddey, who had been making some practical use of an X-ray machine in the work of inspecting cattle intended for slaughter. Dr. Laddey illustrated his paper by means of ante and post-mortem photographs of animals subjected to the experiment. The paper will be found elsewhere in the pages of this magazine.

The Public Health Committee was requested to secure if possible an X-ray apparatus for use at the next meeting.

Dr. Werner Runge reported some personal experiments con-

ducted by him during the past few months and his report, which is of great interest, is here given in full:

REPORT OF DR. WERNER RUNGE'S EXPERIMENTS IN INOCULATING CATTLE WITH THE BACILLI OF HUMAN TUBERCULOSIS.

To the President and Members of the Veterinary Medical Association of New Jersey,

GENTLEMEN:—The statement made by Prof. Koch, M. D., at the British Congress on Tuberculosis, held in London, Eng., June 23d, 1901, that human tuberculosis cannot be transmitted to the bovine race is an error and without any practical foundation. It has not only aroused the profession in general, but medical and laymen have become more or less interested in the matter. In view of these facts the members of our profession should use their utmost efforts in investigating the above statement.

Through the kindness of Mr. Stephen Francisco, of the Fairfield Dairy, Caldwell, N. J., cattle have been placed at my disposal, as well as the use of the Isolation Hospital at said dairy, for experimental purposes. Also through the valuable aid of Dr. R. N. Connolly, Bacteriologist for the Newark Board of Health, I was assisted in selecting a specimen of virulent sputum of a young person affected with acute tuberculosis.

On August 14th last, I selected a yellow cow that gave no reaction to retest nor had it done so to a previous tuberculin test made Nov. 12, 1900, and injected the same hypodermically on August 29, 1901, with the above-mentioned sputum. At both shoulders and both flanks I made also four injections into a five weeks' old calf, born in the pasture lot and kept in said lot until the day of injection, whose mother previous to the birth of said calf gave no reaction to the tuberculin test. As all cattle of this dairy, about 600 in number, are tested previous to their coming into the herd, and are rejected if they give any reaction at all, it is reasonable to believe that this calf was free from tuberculosis, as it had never been exposed to the same. The temperature of both animals taken twice daily after the injection of the sputum did not show anything abnormal, and no symptoms of any disease were revealed except some enlargement of the retro-pharyngeal glands.

The calf was killed Nov. 14, 1901, 11 weeks after injection.

The cow was killed Nov. 20, 1901, about twelve weeks after injection.

The post-mortem showed the following lesions:

The calf killed Nov. 14 did not show any marks at the place of injection, but enlarged tubercular bronchial glands, several of which were broken down and calcareous. A large number of gray nodules were visible in the lung tissue, also one cyst about the size of a small hen-egg and full of pus.

The microscopical examination of the scraping of the walls of the cyst as well as the scraping of the interior wall of the broken-down gland showed the bacilli of tuberculosis in large numbers.

The cow killed Nov. 20 had a large cyst full of pus at the right shoulder and an induration of the tissue on the left side at the places of injection. The bronchial glands were enlarged and partly broken down and full of calcareous substance.

The microscopical examination of the scraping of the interior of the wall of said broken-down glands also showed tubercle bacilli.

Respectfully submitted, (Signed) WERNER RUNGE.

Fellow members expressed their appreciation of Dr. Runge's efforts in experimental work, and among those who joined in the discussion were Drs. Pearson, Hoskins, Kitchin and Rogers.

Dr. James McDonough, of Montclair, here read a paper entitled "The Horse's Foot." Dr. McDonough's paper was well written and upon a subject with which he is especially conversant. As the hour was late it was voted that a discussion of the paper be deferred until the next meeting.

At 5.30 the meeting adjourned. Next meeting to be held at Newark in July.

GEORGE W. POPE, *Secretary*.

THE SOCIAL SIDE OF THE MEETING OF THE VETERINARY MEDICAL ASSOCIATION OF NEW JERSEY.

The literary side of the above association meeting, at Trenton, N. J., on Jan. 9, was so replete with good things, which were so ably dealt with, by some of the best talent that our country boasts (all of which our readers will be furnished with elsewhere by Secretary Pope), that we feel that it will not detract in any way from the dignity of the occasion to make brief mention of the social side. We were fortunate in participating in both the literary and social treats, through a determination to head a delegation from New York, to visit this New Jersey Association, at its next meeting, in token of appreciation of the efforts, and result of said efforts, upon the social and clinical aspect of the A. V. M. A., at Atlantic City, by its President and the committees appointed by him. This determination, actuated by this feeling of appreciation, was reached *en route* from Atlantic City to New York at the termination of the National Convention, and given expression to in the presence of several New York veterinarians, who approved of it. Our determination, although taken thus early, never wavered, notwithstanding the fact that the delegation, at the eleventh hour, had become so insignificant that it could be counted on the first finger of one hand. And we went, and were not sorry for it either. When we boarded the 8.15 A. M. train we discovered that President Lowe, whom we had planned to meet in the Pennsylvania depot, was already on board, with a goodly number of members from Paterson, Passaic, Orange, Newark, Ridgewood, Jersey City, Garfield, Montclair, and perhaps from many other places that we did not know. After reaching the hotel, we were presented to a distinguished M. D., Dr. Kitchen, of East Orange, who for some years past has been devoting his energies to

the scientific breeding and feeding of Jersey cattle ; who subsequently read a paper on "Parturient Paresis," and who talked like a "past-master" in the art when discussing "dietetics." But this is not the social side, although the last mentioned subject may bear some relation to it. Shortly after the President had delivered his address, a delegation from Pennsylvania arrived in the persons of Drs. Leonard Pearson and W. Horace Hoskins. As I have elected to narrate the social side, and am leaving all the good things that took place within the assembly hall for the Secretary to portray, we must pass over the three hours from the time of our arrival at the hotel at 10 A. M. to 1 P. M. (devoted principally to legislative matters) to adjournment for luncheon. At this juncture the guests were invited by the President to accompany the members to the dining hall of the Trenton House, in which the meeting was held, where, entering a few minutes late, we found about thirty happy looking gentlemen seated, and a chair reserved for us at the President's left, Dr. Pearson occupying that at his right. The informal and cheerful conversation, after the perplexing questions of the morning, did much toward making the hour a pleasant one, and preparing the minds for the reception of the good things yet in store. At 2 P. M. the meeting reconvened, and from that time until five o'clock we enjoyed the excellent papers and discussions presented, when there was a sudden and somewhat precipitous exit from the assembly hall, the 5.47 train being the object of the moment. With one or two exceptions it was reached in time, and the social side of the meeting was renewed, and informal conversation again resumed by the little group which continued to grow less at each station at which the train stopped until we reached Jersey City, when we found our New York delegation to be all that remained, as we stepped aboard the ferryboat, and reflected upon the success of the meeting. And right here we will say that had we not taken a strong resolution to confine ourself to the social side of this meeting, we certainly would have broken out once or twice, as our enthusiasm over the literary side would flash up, as our thoughts would recall certain things—notably the paper of Dr. Laddey, member of the "Public Health Committee" of the Veterinary Medical Association of New Jersey, and probably the youngest man in that assembly hall, whose original work on the use of the X-ray as an aid in the diagnosis of tuberculosis in cattle, illustrated by photographs and radiographs, received the commendation and approval of no less an authority than

Prof. Pearson, Dean of the Veterinary Department of the University of Pennsylvania, recently returned from a sojourn through Europe, where he has visited the famous laboratories of bacteriology and eleven veterinary schools, who, at the request of President Lowe, closed the discussion on tuberculosis. We need not tell those of you who have been fortunate enough to listen to Dr. Pearson that it was a literary treat; and the fact of his recent visit abroad added to its interest. He also confirmed the very interesting report of the chairman of the Public Health Committee, Dr. W. Runge, of Newark, who read a most interesting paper relating the details of his experiments in the transmission of tuberculosis from man to animals. The memory of these papers and discussions and other good things, are a temptation to treat on the literary side, as well, but we have purposely avoided doing so, that REVIEW readers may get it first handed, from the papers and from the accurate notes of Secretary Pope.

R. W. E.

ONTARIO VETERINARY ASSOCIATION.

The annual meeting of this association was held in the Ontario Veterinary College, Toronto, Canada, on Friday, Dec. 20.

In the absence of the President, Dr. H. Wende, V. S., the First Vice-President, Dr. J. H. Tennant, took the chair, opened the meeting at 11 o'clock and after a few preliminary remarks called for the usual routine of business, viz., the reading of the minutes of the previous meeting, the Secretary-Treasurer's and Auditor's reports, which were read and approved.

The following new members were duly proposed and accepted: Messrs. W. J. R. Fowler, V. S., C. Brinel, V. S., J. H. Engel, V. S., A. D. Stewart, V. S., and R. A. Milne, V. S.

A number of communications were then read.

It was then moved by Dr. O'Neil, seconded by Prof. Reed, of the Guelph Agricultural College, and resolved that the Secretary be instructed to write to Mrs. R. S. Huidekoper and express to her and family the deep sympathy of the members of this association with them in the sad loss they have sustained by the death of the late eminent veterinary surgeon, R. S. Huidekoper.

The meeting then adjourned to meet after luncheon.

The President, Dr. H. S. Wende, opened the meeting after lunch, and explained his absence earlier being in consequence of the non-arrival of his train on time, and after a short address called for the reading of papers.

Prof. J. H. Reed described a case of urethral calculus in a gelding. He removed it by surgical operation. This was followed by considerable swelling of the penis, which soon subsided. A short time afterwards another calculus appeared in the urethra; this one was much larger than the first. He removed this also by a similar operation. Both calculi were situated near the ischial arch. There was some constriction of the urethra following the operations. But complete recovery resulted.

Dr. Orr Graham read a paper on "Œdema of the Tongue of the Horse," of which he had seen some cases. The conditions were rapid swelling of the tongue, so great that it completely filled the cavity of the mouth, pressing the jaws widely apart and the tongue protruding some distance, accompanied by an abundant discharge of fluid from the mouth and nostrils. In two instances the animals died from suffocation. The disease came on very rapidly and without any cause that he could discover. When the swellings began to recede, the recoveries were rapid and permanent.

Dr. S. E. Boulton read an excellent paper on the necessity for observing kindness and gentleness in the treatment of our patients, and although severe and painful operations may sometimes be necessary, everything possible should be done to alleviate pain and obviate suffering.

Dr. D. K. Smith, professor of pathology and microscopy at the Ontario Veterinary College, read a very useful and practical paper on preserving and preparing pathological specimens. He gave demonstrations of the use of the microtome, also of staining and mounting microscopic specimens.

Dr. W. J. Wilson read a paper on the treatment of tetanus. He claimed that "serum therapy" has not brought the good results that its advocates anticipated—and he explained his own mode of treatment.

The reading of the papers was followed by interesting discussions upon them, in which many members participated, and it was resolved that the thanks of the meeting be tendered to those gentlemen who had contributed to the interest of the meeting by reading the papers.

The sum of \$25 was appropriated for a medal to be competed for by the students of the Ontario Veterinary College at the approaching spring examinations.

The Secretary was instructed to send post cards to all duly qualified veterinary practitioners in Ontario, who have not reg-

istered in accordance with the Act of Incorporation of the Ontario Veterinary Association, requesting them to register. Also he was instructed to get a number of new copies of the Ontario Veterinary Register printed.

The following gentlemen were appointed to read papers at the next annual meeting: Messrs. L. A. Wilson, J. D. O'Neil, W. J. Wilson, S. E. Boulter, R. A. Milne, C. Brind, Drs. D. K. Smith and J. H. Tennant.

The following is the list of officers for the ensuing year:

President—J. H. Tennant.

First Vice-President—W. Steele.

Second Vice-President—W. Lawson.

Secretary-Treasurer—C. H. Sweetapple.

Directors—S. E. Boulter, L. A. Wilson, C. Brind, J. H. Engel, J. H. George, F. G. Hutton, R. A. Milne and F. Daly.

Auditors—C. Elliott and J. H. Reed.

Delegates to the Industrial Fair, Toronto—Prof. A. Smith and C. Elliott.

Delegates to the Western Fair, London—Messrs. J. H. Tennant and J. D. O'Neil. C. H. SWEETAPPLE, *Sec'y-Treas.*

VETERINARY MEDICAL ASSOCIATION OF NEW YORK COUNTY.

The words of President Ellis, quoted in the January REVIEW, were probably more prophetic than even this sanguine and enthusiastic veterinarian had imagined them—"We must fill that room this winter." He probably did not believe that the first meeting held after that bold and determined assertion would witness the lecture-room of the New York-American Veterinary College filled as it never was before at a meeting of this society, and by some who are seldom seen at a gathering of this nature. Another outcome of this was the remark heard on all sides that they had no idea that so much of interest was transacted, and so much was to be learned. The interest centred in a surgical clinic, arranged largely through the energy of Dr. Ryder, who guarantees a programme of equal importance for the February meeting.

The meeting was called to order by President Robert W. Ellis, January 3, at 8.15 P. M., with the following members and visitors in attendance:

Drs. S. Atchison, Burns, P. F. Bergen, J. F. Budd, O. Barnett, Jr., David W. Cochrane, J. S. Cattanach, George Cohen, W. D. Critcherson, C. E. Clayton, Edgar Chambers, Cyrus W.

Du Bois, T. E. Delaney, Robert Dickson, Thomas Doyle, Eason, Wm. H. Edson, R. W. Ellis, W. J. Finn, H. D. Gill, F. C. Grenside, G. J. Goubeaud, Hough, A. M. Heard, W. H. Hayes, Elishu Hanshew, D. Hildebrant, R. C. Jones, Theo. A. Kellar, Louis H. Kraus, A. C. Knapp, M. A. Livingston, A. M. Leek, Robert W. McCully, George W. Meyer, W. J. McKinney, L. Nicolas, F. D. Owen, A. E. Parry, Purcell, J. E. Ryder, Andrew Strange, Shaw, Charles Schroeder, Herman Stark, Moffet Smith, and G. W. Taylor.

The minutes of the preceding meeting were read and approved.

Dr. Gill asked that the duties of the Judiciary Committee be defined, and also that individual members give this committee their earnest support in the prosecution of illegal practitioners.

Dr. Ryder reported that the clinical programme was ready for the evening, that the subjects and operators were on hand.

Under the head of "new business," Dr. Gill made a motion that this association draft a request to the Board of Health that all appointments for meat inspection should be graduates of veterinary medicine. Seconded by Dr. Goubeaud, and carried.

Dr. Gill moved that a set of resolutions on the death of Dr. R. S. Huidekoper be drawn up and recorded in the minute book. Seconded and carried. President Ellis appointed as a committee to draft resolutions, Drs. Gill, Sherwood and Dickson.

The meeting now adjourned to the operating room of the college, where the following operations were witnessed:

Overectomy in a mare—Dr. J. E. Ryder.

Peroneal tenotomy—Dr. R. W. McCully.

Tarsal tenotomy—Dr. C. W. DuBois.

Passing stomach tube through nasal cavity—Dr. R. W. McCully.

Passing the seton probe—Dr. J. E. Ryder.

Adjourned. C. E. CLAYTON, D. V. S., *Secretary*.

KEYSTONE VETERINARY MEDICAL ASSOCIATION.

The January meeting was held at N. W. cor. Broad and Filbert Streets, Philadelphia, Pa., January 14th, 1902, with the following members of the profession in attendance: Drs. Cox, Harger, Williams, Carter, Underhill, Lintz, Marshall, Noack and Ranck, also about 20 students of the Veterinary Department, University of Pennsylvania. After the regular business was trans-

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acted we listened to valuable papers by Dr. C. J. Marshall and Dr. S. J. J. Harger.

The object of Dr. Marshall's paper in part was to prevent our brothers in the veterinary profession from making flippant remarks, either to other member of the profession or to our clients, about the uselessness of certain drugs, instruments or operations, especially those which have stood the tests for hundreds of years and proved themselves useful in the hands of skilled men. The incentive for Dr. Marshall writing this paper was certain unqualified statements made at the last meeting of the A. V. M. A. in the discussions. One was that "90 per cent. of the drugs we use in our practice is a fake." Another one was "that the firing iron should never be used." Dr. Marshall would like to know whether the veterinary profession is ready to accept these statements, and, furthermore, if we accept them as facts, then in his opinion it is about time to revise the pharmacopœia.

The next paper, which was very educating to all, was the "Anatomo-pathologic Study of Ringbone and Spavin as Indicated by Examination of Pathologic Specimens." *

E. M. RANCK, *Secretary*.

MAINE VETERINARY MEDICAL ASSOCIATION.

The annual meeting of this association was held at Hotel North, Augusta, January 9th, with President Dr. A. Joly in the chair. Among those in attendance were Drs. A. Joly, Waterville; I. L. Salley, Skowhegan; F. E. Freeman, Rockland; C. L. Blakely, Augusta; A. B. Fairbanks, and J. G. Goddard, Lewiston.

The address of the retiring President, Dr. Joly, was well received, as was that of the Secretary, Dr. Freeman. President Joly spoke as follows:

"Fellow Veterinarians:

"In 1893 the Maine Veterinary Medical Association was founded, and I wish to consider with you, gentlemen, what it has accomplished during nine years of existence and its standing of to-day.

"It began with a small membership, but kept increasing each year; still it has not the number of members it ought to have. It seems to me that every veterinary surgeon in the State should belong to it, yet it has only about two-thirds of the whole number.

* Dr. Harger's paper will be published in the March REVIEW.

"However, with a small membership we have done something; we have met regularly every three months, have become better acquainted with one another, have exchanged ideas, discussed many valuable papers and we have had some important clinics.

"The veterinary profession is better known to-day, the public is beginning to appreciate our work; we find veterinarians in many parts of the State filling municipal offices, either as milk inspectors or as members of the local board of health. The Maine Board of Cattle Commissioners admitted in their last report that their good work depended upon the coöperation with veterinarians of the State.

"The standing of the Maine Veterinary Medical Association to-day, compared with other States of about the same number of veterinary surgeons, is good. Of course, it could not be possible to realize all that we tried to accomplish. For eight years we have endeavored to get a veterinary bill through the legislature; to be sure, we failed, but our courage and convictions must be kept up. If we expect a protection law from the public we must do something for the public in order to be entitled to some recognition. It is true we guard the public in our respective localities, to a certain extent, against contagious diseases communicable to men; but is it appreciated at its real value? I doubt it.

"I think every veterinarian should become a granger, and try his best to be of some benefit to his brother granger in his locality; he might take an active part in the lodge, by preparing careful, instructive papers on some subject important to the farming element; such as veterinary hygiene, proper feeding, care of stock, etc. It seems to me that much good could be done by closer association with our friend, the farmer, and we can do it by joining our local granges, and I hope that next year we will meet not only as brother veterinarians but also as brother grangers.

"Much has been *said* at our meetings about the inspection of cattle for Brighton market, and nothing has been *accomplished*. Since 1895 the State of Massachusetts requires the tuberculin test from all neat cattle shipped to their markets, For four years I believe a proper inspection was made, but for the last three years we all know that it has been, and is to-day, nothing but a farce. We know that about seven-eighths of the cattle shipped to Massachusetts are certified by non-graduates, and, furthermore, we know that such certificates are manufactured,

that is to say, no tuberculin test is applied at all. Such a state of things is a disgrace to the veterinary profession, misleading and fraudulent to the buyers of cattle in the State of Massachusetts. This farcical inspection still costs something, may be twenty-five to fifty cents per head of cattle, and who has to pay for it? The farmer, which is a part of the public; and, brother veterinarians, as I said before, if we want the public to enact laws recognizing the veterinary profession, it is our duty to do something for this same public. Let us take measures to stop this imposition and we can do so by joining granges (if they are willing to accept us), and once a granger, we can have the grangers of Massachusetts to have their legislature investigate the matter, for I am sorry to be obliged to say that the Cattle Commissioners of Massachusetts are looking for their salaries first, the performance of their duties being of secondary importance, and I am told on good authority that it matters little how the inspection of cattle is done. Knowing this condition of things as we know it, are we going to keep quiet? If so we had better disband at once. Our duty as a body, as a profession, requires us to act immediately. 'Better late than never.' Let us inform the public through the medium of the press, let us show the incompetency or dishonesty of the Cattle Commissioners of the State of Massachusetts, for imposing a tax on our neat cattle which, honorably, benefits *nobody*.

"In closing, I thank you for the honor you have bestowed upon me in electing me twice your President. I thank you for your coöperation in the advancement of the veterinary profession, and let us double our efforts to bring our noble profession to its proper standing."

The following officers were elected for the ensuing year:

President—I. L. Salley, Skowhegan.

Vice-President—F. W. Huntington, Portland.

Secretary—C. L. Blakely, Augusta.

Treasurer—Sherman Cleaver, Bar Harbor.

Executive Committee—F. L. Russell, F. E. Freeman, and A. Joly.

Dr. I. L. Salley reported a number of very interesting cases, which resulted in a lively discussion.

It was voted to hold the next meeting at Waterville in April, with a clinic at Dr. A. Joly's hospital.

F. E. FREEMAN, *Secretary*.

THE REVIEW wants all associationists to read it carefully.

GENESEE VALLEY VETERINARY MEDICAL SOCIETY.

The annual meeting was held at the Livingston Hotel, Rochester, N. Y., Jan. 17, 1902, it being one of the most interesting in the history of the society. The meeting was called to order at 11 o'clock by President Dr. T. S. Rich, of Avon, N. Y., and the following members responded to roll-call: W. G. Dodd; Canandagua; P. I. Johnson, Williamson; G. C. Kesler, Holley; N. N. Leofler, Geneseo; J. C. McKenzie, Rochester; T. S. Rich, Avon; W. E. Stocking, Medina; J. E. Smith, Webster; A. George Tegg, Rochester; Leroy Webber, Rochester; D. P. Webster, Hilton; W. J. Payne, Fairport; A. McConnell, Brockport.

Following the usual routine of business came the election of officers for the ensuing year, which were as follows:

President—O. B. French, Honeoye Falls.

Vice-President—G. C. Kessler, Holley.

Secretary—W. E. Stocking, Medina.

Treasurer—Leroy Webber, Rochester.

The meeting then adjourned until 2 P. M. At the afternoon session came the reading of papers. Dr. Taylor's paper on "Acute Indigestion and Flatulent Colic" was a very excellent paper, and was well received and discussed.

Dr. Kessler opened discussion on the use of external applications in various diseases, which brought forth a considerable interchange of ideas, which was very interesting.

Dr. N. N. Leofler's subject, "Nasal Gleet," in which he reported a case of very complete impaction of the sinuses with a thick cheesy pus.

Dr. P. I. Johnson presented a specimen of rupture of the extensor pedis tendon in a young colt, two days old, it being an excellent specimen and well prepared.

After a lively discussion on various other subjects relating to the profession, the meeting adjourned to meet in July.

W. E. STOCKING, *Secretary*.

PENNSYLVANIA STATE VETERINARY MEDICAL ASSOCIATION.

The annual meeting of this association will be held in Philadelphia on March 4 and 5, 1902.

The officers and committees are as follows.

President—S. J. J. Harger, 205 N. 20th St., Philadelphia, Pa.

First Vice-President—W. L. Rhoads, Lansdowne, Pa.

Second Vice-President—M. Moriarty, Gettysburg, Pa.

Third Vice-President—C. W. Boyd, Pittsburg, Pa.

Treasurer—Francis Bridge, Philadelphia, Pa.

Recording Secretary—C. J. Marshall, 2004 Pine St., Philadelphia, Pa.

Corresponding Secretary—E. M. Ranck, 422 N. 41st St., Philadelphia, Pa.

Committee on Legislation—M. E. Conard, West Grove, Pa., Chairman; J. W. Sallade, Pottsville, Pa.; J. C. McNeil, Pittsburg, Pa.; Otto Noack, Reading, Pa.; Benj. Underhill, Media, Pa.; W. Horace Hoskins, Philadelphia, Pa.; F. F. Hoffman, Brookville, Pa.

Committee on Intelligence and Education—Jacob Helmer, Scranton, Pa., Chairman; J. W. Adams, Phila., Pa.; Geo. Magee, Uniontown, Pa.; B. F. Senseman, Philadelphia, Pa.; H. P. Keely, Schwenksville, Pa.; C. Goentner, Byrn Mawr, Pa.; J. Butterfield, South Montrose, Pa.

Committee on Sanitary Science and Police—C. C. McLean, Meadville, Pa., Chairman; R. G. Rice, Towanda, Pa.; J. M. Courtright, Clark's Green, Pa.; H. S. Jackson, Sewickley, Pa.; Charles Williams, Philadelphia, Pa.; C. J. Marshall, Philadelphia, Pa.; J. B. Irons, Erie, Pa.

Committee on Animal Husbandry—Geo. B. Jobson, Franklin, Pa., Chairman; W. H. Ridge, Trevoise, Pa.; A. W. Radley, Bethlehem, Pa.; Leonard Pearson, Philadelphia, Pa.; J. C. Michener, Colmar, Pa.; E. C. Porter, New Castle, Pa.; W. H. Fry, Pine Grove Mills, Pa.

Trustees—Leonard Pearson, Chairman, Philadelphia, Pa.; W. Horace Hoskins, Philadelphia, Pa.; H. B. Felton, Olney, Philadelphia, Pa.; Thomas B. Rayner, Chestnut Hill, Pa.; N. Rectenwald, Pittsburg, Pa.

Local Committee of Arrangements—Drs. C. J. Marshall, W. L. Rhoads, and E. M. Ranck.

IOWA STATE VETERINARY MEDICAL ASSOCIATION.

The fourteenth annual meeting of this association will occur at the Savery Hotel, Des Moines, on Tuesday and Wednesday, Feb. 11 and 12, for which the following programme is announced by Secretary Repp:

Reports of Cases.—"Anthrax in the Horse," W. Hamilton; "Chronic Atrophic Orchitis in the Bull," H. C. Simpson; "Ravages of the Strongylus Tetracanthus," S. H. Kingery; "Urethral Calculus and Paralysis of the Penis," E. G. Marten;

"A Cow Case," G. P. Statter; "Typhoid Fever in a Horse," L. U. Shipley; "A Case in Practice," A. H. Quin; "Impaction of the Small Colon," J. Vincent; "Report of a Case," J. Thomsen.

Papers.—"Abortion in Cows," P. Malcolm; "Amputation of a Bull's Penis," G. M. Walrod; "Parturition Cases," W. Drinkwater; "Obstinate Constipation," J. W. Griffith; "External Ulcerative Ano-Vulvitis," S. T. Miller; "Rabies," D. E. Baughman; "Symptoms of Rabies," S. H. Johnston; "The Trials of the Veterinary Board," H. E. Talbot; "Cæsarean Section," H. L. Stewart.

A surgical clinic will be held in the forenoon of the second day, and a number of instructive operations have been assigned to well-known surgeons. Besides the above programme there will be volunteer papers and important committee reports.

AMERICAN VETERINARY MEDICAL ASSOCIATION.

The Executive Committee has elected Minneapolis, Minn., as the place for holding the annual meeting of 1902. Never did men work harder to bring the association to their city than did the veterinarians of Minneapolis. Everybody seemed to call for it—from the Governor down, and the association may expect a royal welcome when they reach this beautiful northwest city next September.

President Winchester has appointed the following Committee on Pharmacopœia: L. A. Merillat, Illinois, chairman; E. L. Quitman, Illinois; D. King Smith, Canada; E. M. Ranck, Pennsylvania; H. D. Hanson and Roscoe R. Bell, New York.

NEWS AND ITEMS.

DR. J. O. GEORGE, of Camden, N. J., is erecting a veterinary hospital.

MINNEAPOLIS, Kansas City and Chicago solicited the 1902 meeting of the A. V. M. A.

DR. H. C. BABCOCK and Dr. N. V. Boice have recently been transferred from Sioux City to Kansas City.

DR. Z. VELDHUIS, of Freemont, Mich., is taking a post-graduate course at the Kansas City Veterinary College.

JOHN P. WOOD, M. D., of Coffeyville, Kan., who is still in active practice, celebrated his one hundredth birthday on Jan. 5.

He is believed to be the oldest practitioner of medicine in the world.

THE following figures are from the last census: Iowa stands at the head of horse-breeding States, with 1,401,427 horses; Illinois second, with 1,344,784, and Texas third, with 1,266,000.

DR. J. W. CONNOWAY, of the Experiment Station at Columbia, Mo., spent some time during the month of December in Texas, introducing to that State a number of pure-bred cattle, which had been rendered immune to Texas fever.

DR. A. J. SHELDON, of Boston, Mass., who has been in active practice there for a number of years, and at the same time lecturing at the Veterinary Department of Harvard University, has abandoned veterinary medicine for business pursuits.

DR. CHARLES H. JEWELL (N. Y. S. V. C., 1900), formerly of Dunkirk, N. Y., took the civil service examination for meat inspector under the Bureau of Animal Industry on Oct. 22, and received an appointment Dec. 24, being assigned to duty at Kansas City.

DR. ALBERT LONG, an inspector in the B. A. I. service, has been transferred from Kansas City to Boston. During the doctor's three years' stay in Kansas City, he has made many lasting friendships, and will be greatly missed by a wide circle of friends.

DR. W. G. HOLLINGWORTH, of Utica, N. Y., has just completed a very fine operating room, making this addition to his already fully equipped hospital, also enlarging the canine and feline department. Dr. W. A. Young, A. V. C., is house surgeon. The hospital is located at 229 Jefferson Avenue.

DR. GEO. R. WHITE (Columbian University, '97), and Dr. Joseph Plaskett (McGill University, '92), have formed a partnership under the firm name of White and Plaskett. They have just completed the erection of the Nashville Veterinary Hospital, 24 Bridge Avenue, which is probably the largest as well as the best equipped Veterinary Hospital in the South. Dr. White continues to serve as City Veterinarian of Nashville.

DR. VICTOR A. NORGAARD has resigned his position as chief of the Department of Animal Pathology, in the Bureau of Animal Industry, and has been succeeded by Dr. Jno. R. Mohler. While Dr. Mohler is a young man, his rapid rise in the Department of Agriculture has doubtless been the reward of merit, as he has proven a most capable and earnest worker in whatever position he has been assigned.

PUBLISHERS' DEPARTMENT.

Subscription price, \$3 per annum, invariably in advance; foreign countries, \$3.60; students while attending college, \$2; single copies, 25 cents.

Rejected manuscripts will not be returned unless postage is forwarded.

Subscribers are earnestly requested to notify the Business Manager immediately upon changing their address.

Alex. Eger, 34 East Van Buren St., Chicago, Ill., Veterinary Publisher and dealer in Veterinary Instruments, Books, and Drugs, is the authorized agent for the REVIEW in Chicago and the Middle West, and will receive subscriptions and advertisements at publishers' rates.

AIR-CUSHION HOOF PADS.—INFRINGEMENT NOTICE.—The Revere Rubber Co., of Boston, manufacturers of the celebrated pads bearing the name "Air-Cushion," have entered suit against the Consolidated Hoof Pad Company in the United States Supreme Court for an injunction and accounting of profits and damages for their infringement of the Kent patent of March 27, 1900, by the pad which the latter company has placed on sale under the name "Air-Cushion." The Revere Company give notice that "all who deal in or use infringing pads are infringers, and are liable to injunction and for damages equally with the manufacturers thereof."

A SLIGHT CHANGE in the ad. of Charles Marchand, this month, means *no change* in the value of his product from the time you begin the bottle until you have finished it, due to the "New Stopper," there illustrated.

IN these days when the practice of veterinary medicine without a hypodermic syringe is practically impossible, Parke, Davis and Company's "Necessary Equipment," appeals very strongly to the needs of veterinarians.

COLORADO LIVE-STOCK COMMISSION.

"I have used Zenoleum for scab on sheep and mange on cattle and consider it the best and cheapest remedy upon the market.

SOL. BOCK, V.S., State Veterinarian.

THOSE VETERINARIANS who have not used "Red Ball Brand Stock Food" have failed to secure one of the greatest aids to a general practice for the purposes specified in their advertisement.

REVIEWS WANTED.

The publishers will pay 25 cents each for copies of the April, 1901, issue. Address, Robert W. Ellis, D. V. S., Bus. Mgr., 509 W. 152d Street, New York.